SPECIAL CHRISTMAS DOUBLE ISSUE

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The world this year

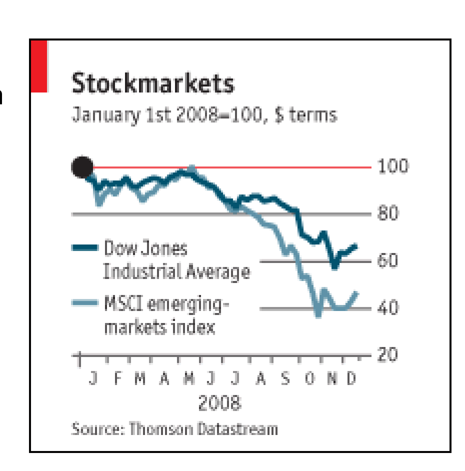
Dec 18th 2008
From The Economist print edition

The credit crunch turned into a full-blown **global financial crisis** in September when Lehman Brothers, one of Wall Street's big investment banks, declared bankruptcy and American officials seized control of American International Group to prevent the giant insurer's collapse. As panic spread, governments engineered the rescue of distressed banks or took them over directly. By the end of the month the remaining big **Wall Street** houses had either been absorbed by others or become bank holding companies.

America and Europe reacted to the unfolding crisis by unveiling broad **bail-out** packages for the financial system. After a battle in Congress America extended $700 billion in funding. With credit markets frozen, central banks took emergency steps to boost liquidity. America's Federal Reserve made unprecedented market interventions, such as buying large amounts of short-term debt issued to companies to enable day-to-day financing.

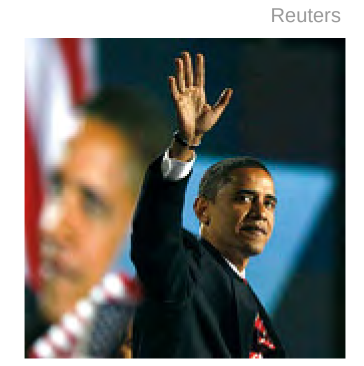
Most central banks slashed **interest rates**. The Fed reduced its rates to near zero, lower than they have ever been.

The global **stockmarket** gains of recent years were wiped out. Hopes that **emerging markets** would remain buoyant during a downturn in the West were dashed when markets plummeted in China, India, Russia and elsewhere.



With **job losses** mounting, governments pondered measures to stave off a deep economic slump. Japan and the euro area fell into **recession** (using the definition of two quarters of negative growth) and America was officially declared to have been in recession since December 2007. The IMF, World Bank and OECD snipped their projections for economic growth next year.

A change is gonna come


Reuters

Events in the markets helped propel **Barack Obama** to a big win in America's presidential election. John McCain, Mr Obama's Republican rival, was widely judged to have fumbled his response to the crisis.

Earlier, Mr Obama fought an epic battle with Hillary Clinton in the Democratic **primaries**. Mrs Clinton was given the job of secretary of state in the Obama administration, which starts work on January 20th. One of the new president's top priorities will be to implement a stimulus package, the passage of which should be made easier by increased Democratic majorities in **Congress**.

Britain's Gordon Brown won plaudits for his handling of the financial crisis. It had looked as though 2008 would be a dismal year for the prime minister. His Labour Party trailed David Cameron's Conservatives by some 30 points in the polls, but rebounded when the Tories failed to explain how they would have handled the crisis differently.

Yasuo Fukuda resigned as **Japan's** prime minister in frustration at his inability to implement policy. The ruling Liberal Democratic Party put Taro Aso into the job, but his future is in doubt as the country's economy contracts.

Kenya was ravaged by violence following a disputed presidential election, leading to the formation of a fragile government of national unity in April. Two judges oversaw separate reports on the trouble that criticised politicians, police and the electoral commission.

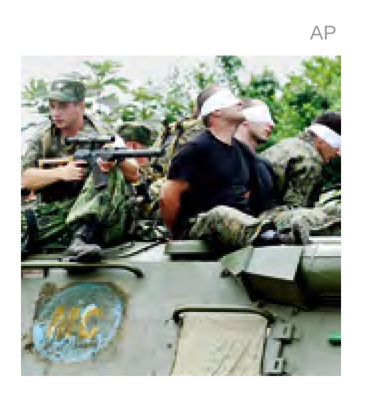
Pakistan's general election was a humiliation for the embattled presidency of Pervez Musharraf. His allies won just 16% of the seats, well behind the Pakistan People's Party led by Asif Zardari, the widower of Benazir Bhutto, a former prime minister assassinated last year. Mr Musharraf eventually resigned when parliament threatened to impeach him; Mr Zardari won an indirect ballot to replace him.

The comandante's last move

Fidel Castro stepped down as **Cuba's** president, handing over the job to his younger brother, Raúl, whose plans to reform the island's communist economy were slowed by two devastating hurricanes.

A resurgent **Russia** invaded **Georgia** in August after Georgian forces entered the breakaway region of South Ossetia. It was Russia's first big military incursion beyond its borders since it invaded Afghanistan in 1979. Moscow pulled its troops back, eventually, but recognised the independence of South Ossetia and Abkhazia.

AP



Dmitry Medvedev won Russia's presidential election in March, though real power remained with Vladimir Putin, who became Mr Medvedev's prime minister.

Radovan Karadzic, the Bosnian Serb wartime leader, was arrested in Belgrade, 13 years after being indicted for crimes against humanity. He was sent to the war-crimes tribunal in The Hague to stand trial.

India endured another year of frequent terrorist incidents, including a spate of bombings in one day in Jaipur. But even the experts were taken by surprise at the audacity of a co-ordinated attack by gunmen on **Mumbai**. Security forces fought the assailants over several days and at least 190 people were killed.

EPA



The violence was less severe in **Iraq** than in previous years; American forces handed responsibility back to Iraqi troops for Anbar province, the bloodiest zone in the first years of the insurgency. Iraq's parliament endorsed an agreement that requires American troops to withdraw from Iraq altogether by the end of 2011.

Conversely, it was the deadliest year for coalition forces in **Afghanistan** since the 2001 invasion. In a chilling development, a 13-year-old boy was deployed as a suicide-bomber by the Taliban, killing three British marines.

After being dogged by corruption allegations, Ehud Olmert decided to step down as **Israel's** prime minister. He remains in office until February's general election, which Binyamin Netanyahu is currently favoured to win.

When no means wait and see

The **European Union** was thrown into a tizzy when Irish voters rejected the Lisbon treaty, which Eurosceptics see as an effort to impose the old draft constitution by the back door. EU leaders pressed Ireland to hold another vote.

The **ideological divide in Latin America** widened. Venezuela nationalised the cement and steel industries, Argentina's government took over its private pension system and Ecuador defaulted on its foreign debt. But most governments in the region maintained their trust in free markets and inflation targeting.

Rest ye merry gentlemen

Merger activity dwindled compared with 2007. Several large takeover bids failed, such as **Microsoft's** offer for **Yahoo!** and **BHP Billiton's** pursuit of **Rio Tinto**. **Hewlett-Packard** did buy **EDS**, and

Anheuser-Busch, which makes Budweiser beer, was taken over by Belgium's **InBev**. At $52 billion, it was one of the biggest ever foreign acquisitions of an American company.

Reuters

China's big year as host of the summer **Olympics** didn't go quite according to plan. The games were a spectacular success, but China's suppression of the worst outbreak of violence in **Tibet** in decades led to protests in cities around the world that took part in a relay of the Olympic torch en route to Beijing.

Three months before the Olympics China suffered its worst natural disaster in 30 years when a massive **earthquake** rocked the province of Sichuan, killing some 70,000 people and leaving 5m homeless. China launched an all-out rescue effort that was widely praised.

In contrast, **Myanmar's** ruling junta was roundly condemned for its response to a cyclone that left large swathes of the Irrawaddy delta submerged, causing at least 145,000 deaths. The furtive regime was eventually persuaded to allow a trickle of foreign aid into the deluged region.

Most **carmakers** had a rotten year, no more so than in America. Detroit's Big Three went caps-in-hand to Congress for public assistance.

EPA



The **price of oil** breached $100 a barrel for the first time in January. Oil prices spiked at more than $147 in July, but fell by more than two-thirds as the world economy drooped.

The end of the **commodity boom** was especially welcomed in countries that had witnessed riots over high **food prices** earlier in the year.

Thaksin times

Thailand saw prime ministers come and go with alarming frequency amid a political crisis caused by a stand-off between allies of Thaksin Shinawatra, a former prime minister toppled in 2006, and pro-monarchy supporters. The latter staged a sit-in at Bangkok's international airport for a week that left thousands of passengers stranded.

Canada's Stephen Harper failed to win a parliamentary majority for his Conservative government; two months after the election the prime minister had to suspend Parliament to avoid being ousted by the opposition.

Robert Mugabe won a presidential run-off election in **Zimbabwe** after his opponent, Morgan Tsvangirai, who won the first round, pulled out because of intimidation. A power-sharing deal gave the prime minister's job to Mr Tsvangirai. Conditions remained miserable for most Zimbabweans; inflation (officially) ran at hundreds of millions per cent and cholera swept the country.

Thabo Mbeki was ejected by the African National Congress from his post as **South Africa's** president. Jacob Zuma, the ANC's party leader, seems likely to win the job in 2009, provided that continuing court cases do not ensnare him. A breakaway party, the Congress of the People, may dent the ANC's authority in a general election in mid-2009, though probably without ousting the ruling party.

Bernard Madoff, a Wall Street veteran, was arrested in possibly the biggest fraud in history; his Ponzi scheme may have lost investors $50 billion.

It was a bad year for **Colombia's** FARC guerrillas. Two of their leaders were killed, one of them in a bombing raid by Colombia's army on a camp just across the border in **Ecuador**, which prompted a break in diplomatic relations. The army also rescued Ingrid Betancourt, the FARC's most famous hostage.

A "farewell kiss"

Pundits began writing **George Bush's** political obituary as his approval ratings sank to new lows. At a press conference in Baghdad a disgruntled Iraqi journalist threw his shoes (size ten) at the American

president, an Arab insult.

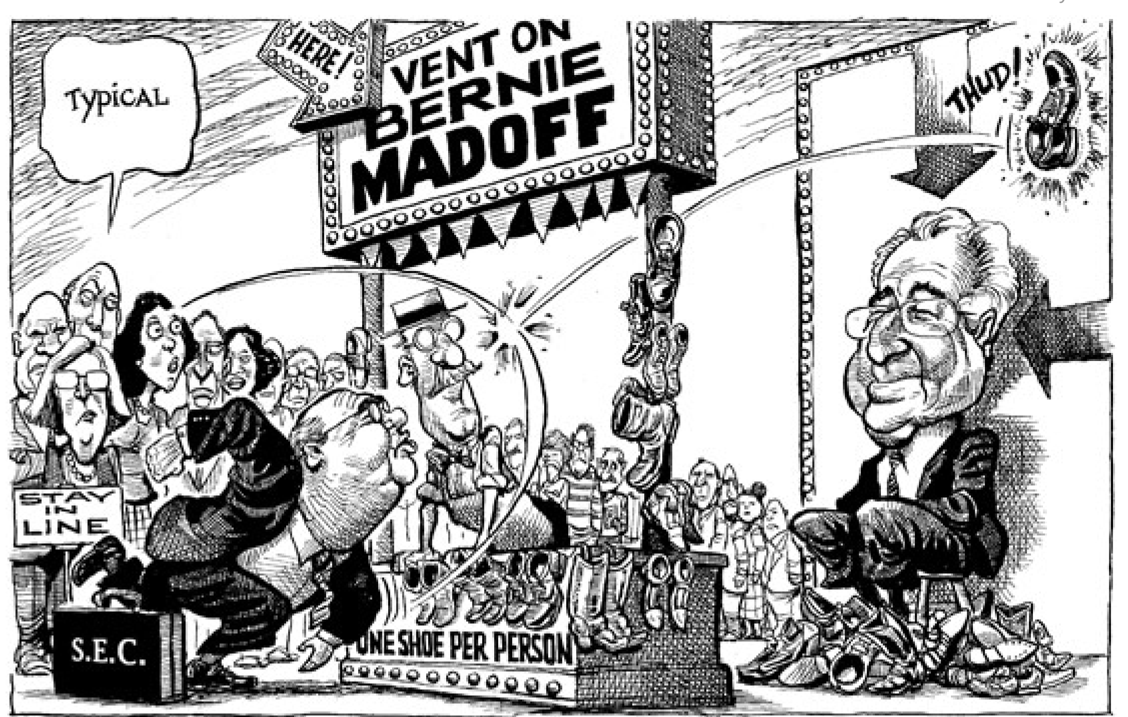
The first protons were circulated around the **Large Hadron Collider**. Designed to help physicists explain the existence of mass, some feared the experiment would create a gigantic black hole. Wall Street's collapse just a few days after the LHC was switched on was deemed a coincidence.

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KAL's cartoon

Dec 18th 2008
From The Economist print edition

Illustration by KAL



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Trade and the world economy

Fare well, free trade

Dec 18th 2008
From The Economist print edition

With the global economy facing its worst recession in decades, protectionism is a growing risk

Illustration by David Simonds



THIS Christmas the world economy offers few reasons for good cheer. As credit contracts and asset prices plunge, demand across the globe is shrivelling. Rich countries collectively face the severest recession since the second world war: this week's cut in the target for the federal funds rate to between zero and 0.25% (see article) shows how fearful America's policymakers are. And conditions are deteriorating fast too in emerging economies, which have been whacked by tumbling exports and the drying-up of foreign finance.

This news is bad enough in itself; but it also poses the biggest threat to open markets in the modern era of globalisation. For the first time in more than a generation, two of the engines of global integration—trade and capital flows—are simultaneously shifting into reverse. The World Bank says that net private capital flows to emerging economies in 2009 are likely to be only half the record $1 trillion of 2007, while global trade volumes will shrink for the first time since 1982 (see article).

This twin shift will force wrenching adjustments. Countries that have relied on exports to drive growth, from China to Germany, will slump unless they can boost domestic demand quickly. The flight of private capital means emerging economies with current-account deficits face a drought of financing as well as export earnings. There is a risk that in their discomfort governments turn to an old, but false, friend: protectionism. Integration has less appeal when pain rather than prosperity is ricocheting across borders. It will be tempting to prop up domestic jobs and incomes by diverting demand from abroad with export subsidies, tariffs and cheaper currencies.

The lessons of history, though, are clear. The economic isolationism of the 1930s, epitomised by America's Smoot-Hawley tariff (see article), cruelly intensified the Depression. To be sure, the World Trade Organisation (WTO) and its multilateral trading rules are a bulwark against protection on that scale. But today's globalised economy, with far-flung supply chains and just-in-time delivery, could be disrupted by policies much less dramatic than the Smoot-Hawley act. A modest shift away from openness—well within the WTO's rules—would be enough to turn the recession of 2009 much nastier. Incremental protection of that sort is, alas, all too plausible.

Fair-weather free-traders

In many countries politicians' fealty to open markets is already more rhetorical than real. In November the leaders of the G20 group of big rich and emerging economies promised to eschew any new trade

barriers for a year and to work hard for agreement on the Doha round of trade talks by the end of December. Within days, two of the G20 countries, Russia and India, raised tariffs on cars and steel respectively. And the year is ending with no Doha breakthrough in sight.

As economies weaken, popular scepticism of open markets will surely grow. Among rich countries, that danger is greatest in America, where grumbles were heard long before recession set in. The new Congress, with bigger Democratic majorities, has a decidedly less trade-friendly hue. Barack Obama's campaign rhetoric left an impression of a man in two minds about trade, which he has since done nothing to dispel.

Now that their exports are faltering, emerging economies too may become less keen on trade. The WTO's rules allow them plenty of scope: after two decades of unilateral tariff-cutting most of their tariffs are well below their "bound" rates, the ceilings agreed in the trade club. On average they could triple their import levies without breaking the rules.

Handouts to the ready

Politicians from Washington to Beijing are being pressed to help troubled industries, regardless of the consequences for trade. A bail-out of Detroit's carmakers, whatever its final extent, will be a discriminatory subsidy. As China's exporters go bust by the thousand, industries from textiles to steel have been promised handouts and rebates. Subsidies will beget more subsidies: Nicolas Sarkozy, France's president, says that Europe will turn into an "industrial wasteland" if it too does not prop up its manufacturers. They will also invite retaliation. With China's bilateral trade surplus at a record high even as America's economy slumps, Congress will not take kindly to Beijing's bolstering of its exporters.

Exchange-rate movements could also prompt protectionist responses. Chinese officials have said publicly that they will not push down the yuan, and their currency has risen in trade-weighted terms. However, it did slip against the dollar in late November. Viewed from America, China still seems to be following a cheap-yuan policy. A Sino-American trade spat is all too plausible.

Add all this together and it is hard for a free-trader not to worry. So what is to be done? The first requirement is political leadership, especially from America and China. At a minimum, both must avoid beggar-thy-neighbour policies. Second, a conclusion of the Doha round would help. A deal would reduce the risk of broader backsliding by cutting many countries' bound tariffs—and it would establish Mr Obama's multilateral credentials. Third—Doha deal or not—is greater transparency. A good recent idea is that the WTO publicise any new barriers, whether or not they are allowed by its rules.

The best insurance against protectionism, however, is macroeconomic stimulus. Boosting demand at home will reduce the temptation to divert it from abroad. By historical standards policymakers are acting aggressively, as the Federal Reserve did this week. But the effort is unevenly, and poorly, distributed. Emerging economies from which capital is fleeing have little room to boost spending. Some creditor countries (notably Germany) are holding back on fiscal stimulus, while the world's biggest borrower (America) is acting the most boldly. A bigger push to boost domestic demand in creditor countries coupled with more help, through the IMF, to cushion cash-strapped emerging economies would ease the world economy's adjustment and brighten the prospects for free trade. In the 1930s protectionism flourished largely because of macroeconomic failures. That must not happen this time.

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Congo

Stop paying for murder

Dec 18th 2008
From The Economist print edition

Cut off Western aid to Rwanda and Congo until their governments stop sponsoring murderous proxy militias

AFP

VIOLENT conflict in eastern Congo has killed thousands more people in the past three months and made more than 250,000 homeless. With disease rampant and hunger spreading, this is a humanitarian disaster comparable to that in Sudan's Darfur region or in Somalia. Europe and America have condemned the slaughter but have stumbled over how to stop it. They now have reason to try a lot harder.

A United Nations report published last week has stripped away some of the myths surrounding the fighting in Congo's eastern provinces of North and South Kivu and exposed its underlying causes. It shows how the war is largely a proxy fight between rival militias that are being armed and encouraged by Rwanda's government and by Congo's. The evidence set out includes photocopies of e-mails, letters and legal documents. Most damningly, the report lays bare the intimate links between the National Congress for the Defence of the People, known by its French abbreviation CNDP, a Congolese Tutsi militia led by General Laurent Nkunda (pictured left), and the Rwandan government led by another Tutsi, President Paul Kagame (pictured right). It says that "the Rwandan authorities have been complicit in the recruitment of soldiers, including children, have facilitated the supply of military equipment, and have sent officers and units from the Rwandan Defence Forces to [Congo] in support of CNDP."

Since the genocide in Rwanda in 1994, when Hutu extremists killed about 800,000 Tutsis and moderate Hutus in little more than three months, Rwanda has often intervened in Congo, arguing that it has done so to protect Congolese Tutsis and to hunt down those Hutus responsible for the genocide. This has evoked the sympathy of foreigners, particularly in the United States and Britain, who have chosen not to examine Rwanda's actions in Congo too closely.

The UN report makes it impossible for them to look away. Rwanda's support for the CNDP is fuelling much of the violence. General Nkunda deserves to be in the dock at The Hague for war crimes. The report also shows that both General Nkunda's lot and the main Congolese-backed Hutu militia, the Democratic Forces for the Liberation of Rwanda, have links with mining companies. Both extort large sums of money from mines they control. They also do illegal mining, from which Rwanda profits as well. The booty helps pay the militias to fight, giving them good reason to carry on the conflict.

Co-operate or lose your cash

The UN maintains its biggest peacekeeping force in the world in Congo, 17,000 strong, but has struggled to impose order on chaotic North and South Kivu. The force should be beefed up, at least temporarily, with fresh soldiers from European Union countries, as the UN's secretary-general has requested. But new troops can deal only with the symptoms of the conflict. The UN report gives foreign governments the authority to tackle its roots. That is best done by putting pressure on both Rwanda's Mr Kagame and on his Congolese counterpart to rein in the proxy fighters and honour peace agreements signed nearly a year ago.

Outsiders have powerful levers. Rwanda's government, in particular, depends heavily on Western aid; in the past five years it has received more than $1.6 billion. That should stop until Mr Kagame starts to restrain General Nkunda and his militia. The Dutch and Swedes have given a lead, cancelling their aid to Rwanda in protest against its government's backing of the murderous general. Other governments, notably Britain's, which is Rwanda's single biggest backer, should do likewise until Mr Kagame changes his ways.

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Israel and the Palestinians

Lift the siege of Gaza

Dec 18th 2008
From The Economist print edition

The best way to weaken the rejectionists of Hamas is to restore the Palestinians' belief in diplomacy

EPA



CONTRARY to the absurd claim of the rapporteur of the UN's Human Rights Council, to whom Israel refused entry this week, the Gaza Strip is not facing a Nazi-like "Holocaust" at Israel's hands. But the lot of the 1.5m Palestinians cooped up in this miserable scrap of desert is undeniably awful. Locked in on one side by Israel and on the other by Egypt, the Palestinians of Gaza have been subjected to an ever-tightening economic siege since the Palestinian Islamist movement, Hamas, booted the secular Fatah movement out of the strip in June 2007. The possible end this week of a truce between Hamas and Israel can only make things worse. As the truce has frayed, Israel has responded to the Palestinian rockets flying over the border by closing the crossings for long periods, depriving Gaza's residents of many necessities of life (see article).

A house divided

If the lot of Gaza is awful, the condition of the Palestinians as a whole is not much better. Unlike Hamas, the Fatah-dominated Palestinian Authority (PA) in the West Bank stands by the decision the Palestine Liberation Organisation made a decade and a half ago to recognise Israel. Since the summit George Bush held last year in Annapolis, the PA's president, Mahmoud Abbas, has been talking to Israel's prime minister, Ehud Olmert, about how to form a Palestinian state in the West Bank and Gaza. But they have not closed the gap on crucial issues such as borders, Jerusalem or refugees. And even if they had, it is not clear what such an agreement would be worth. Mr Olmert is a lame duck who will leave office after Israel's election in February. Hamas calls Mr Abbas a lame duck too: his four-year term expires in January. Though he will probably stay on anyway, a Palestinian president who speaks only for the West Bank and not for Gaza is in no position to deliver peace.

Faced by this dispiriting stalemate, it would be understandable if Barack Obama concluded that he could do nothing big in Palestine when he becomes America's president in January. There can certainly be no final deal while the Palestinians are split in half. Hamas is strong in the West Bank as well as Gaza and could easily blow up any deal it did not like. And for all its equivocation, Hamas still refuses to say plainly that it can ever accept the permanence of Israel. That is, by anyone's standards, a deal-breaker, ruling out any sudden sprint to the two-state solution supported by almost everyone else.

Sprinting, however, is not the only way to move forward. A world blocked by the Palestinians' internal rift

should not conclude that nothing can be done. It should push the Palestinians to form a unity government, empowered to continue the peace talks even if Hamas reserves its final position. The Saudis and Egyptians have already tried this and failed, but the Arab states collectively could try again. One thing that hampered previous efforts was the hope inside Israel, America and perhaps privately inside the Palestinian Authority too that Hamas could be felled by the siege. But this is almost certainly a false hope as well as a callous policy. Extreme privation did not prevent tens of thousands of defiant supporters in Gaza this week from celebrating Hamas's founding. For tactical reasons as well as moral ones, Israel should lift its economic siege. If the rocket fire continues, it will have to find a military answer.

As for Mr Obama, it is hard to imagine an incoming president better placed to reach over the heads of Hamas's leaders and restore the waning belief of Palestinians in the power of diplomacy. He can do this in two ways, one immediate and one more sustained. Some time before Israelis vote in February, Mr Obama should spell out precisely the sort of peace America envisages: two states sharing Jerusalem, with a border very close to the pre-1967 armistice line, not one that lets Israel keep its settlement blocks deep in the West Bank. Just as Hamas needs to hear that Israel is not going to disappear, so Israel—especially if it elects a Likud government—needs to hear that America will not let it hold those settlements for ever.

Mr Obama's more sustained task will be to make sure as diplomacy proceeds that both sides honour their agreements. Israel and the PA, for example, long ago signed a "road map" that included a demand for Israel to stop expanding its settlements in the occupied territories. By persistently ignoring that obligation, Israel has chipped away at the belief of even the most doveish Palestinians that they will ever gain the state they are promised. To restore their faith, Mr Obama has to stop Israel settling its citizens in places that are to become the new Palestine. That may require a painful clash with an ally. But there can be no better way to restore America's credibility as a mediator, and woo Palestinians away from Hamas's dark vision of war to the end between Muslim and Jew in Palestine.

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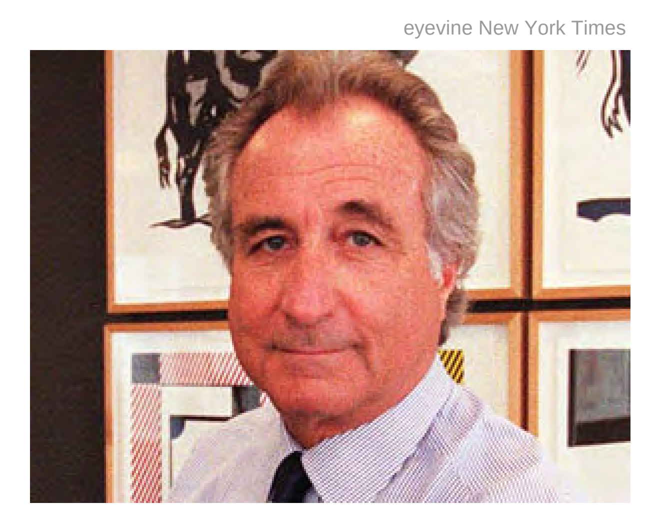
The Madoff affair

Dumb money and dull diligence

Dec 18th 2008
From The Economist print edition

Like mould, Madoffs flourish in the darkness

eyevine New York Times



WRITING about one of the great swindles of the 1930s, J.K. Galbraith pointed to three traits of any financial community that he believed put it at risk of fraud. There was the tendency, he wrote in 1961, to confuse good manners and good tailoring with integrity and intelligence. There was the sometimes "disastrous interdependence" between the honest man and the crook. And there was the "dangerous cliché that in the financial world everything depends on confidence. One could better argue the importance of unremitting suspicion."

The case of Bernard Madoff, a New York financier who has allegedly confessed to running a pyramid scheme that destroyed up to $50 billion of his clients' money, has all three traits (see article). The former chairman of NASDAQ was as well known to insiders on Wall Street as he was in the posh Palm Beach Country Club in Florida, where he was a pillar of Jewish philanthropy. His clients were fiercely loyal; they had to be or he would cut them out of his hallowed investment circle and month-after-month returns of metronomic regularity. And he thrived in an era of cheap credit, when greed and gullibility became far more powerful than fear and suspicion.

What marks Mr Madoff's case out, however, is the calibre of investor he suckered. It is not the first time that wealthy people have been swindled out of huge sums of money, nor will it be the last. But never have so many big financial institutions—the oxymoronic "smart money"—been so bilked by an individual. It is here that investors, as well as the authorities, should tighten the thumbscrews and demand more transparency.

Oxymorons

Tragicomically, a handful of global banks that had fared well during the financial meltdown of the past 18 months are on the list of those caught out. HSBC, a British bank, Santander of Spain, and BNP Paribas of France: all bear a share of losses that add up to $33 billion, according to a Bloomberg tally. So were the suave private bankers of Switzerland and Singapore.

It is, however, the reputation of the big funds of hedge funds—some belonging to the banks, others at firms like Britain's Man Group and America's Tremont Capital Management—that have been most damaged. They charge whopping fees, say 1.5% of assets, largely on the basis of their ability to pick out clever people to manage their clients' money. Their business has flourished partly because the hedge-fund industry is so opaque: if investors could dig out more information for themselves, they would not

have to pay others to penetrate the veil for them. They are also the largest investors in hedge funds, accounting for about half the investment in the industry, or $800 billion at the end of last year.

Yet for all their insights and access, some of them missed red flags billowing over Mr Madoff's business, such as the way he kept custody over his clients' accounts, handled the trades himself and employed an obscure accounting firm. They ignored warnings from lesser mortals, such as one in 2001 from *MAR/Hedge*, a diligent trade journal. They never wondered why, though the sums he managed were vast, he rarely caused a ripple in the markets. Their argument that enlightened self-interest is a reason to leave the hedge-fund industry largely unscrutinised and unregulated looks ever harder to sustain.

The investors were not the only dullards. The regulators, too, were taken for a ride. The Securities and Exchange Commission (SEC), Wall Street's regulator in chief, overlooked Mr Madoff's investment-advisory business, even though it had assets under management of $17.1 billion at the start of 2008. The outgoing head of the SEC has admitted the commission made a hash of the Madoff case, failing to act on warnings made nearly a decade ago.

Not even the best of regulators (and the SEC is not that) can be sure of stopping a determined fraudster. The authorities can, however, help investors make better judgments by requiring more disclosure from hedge funds and other high-fee asset managers. It would have been particularly useful to know how much of their clients' money they were investing in inscrutable people and illiquid assets—even if, at the time, few investors may have cared.

The industry has made a fetish of keeping its clients—and competitors—in the dark about its holdings. But the credit crunch has revealed how few original ideas most of them held. Like sheep, many of them flocked to borrow money to enhance returns, parlaying this as genius. Some also turned to money managers like Mr Madoff, where they were mercilessly fleeced. Let the light shine in.

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Evolution

Of music, murder and shopping

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It is time to turn to Darwin to explain human behaviour

Illustration by Claudio Munoz



WHAT do music and murder have in common? One clue is their tendency to meet in some of Italy's more melodramatic operas. In the most famous of these, Tosca's singing is so seductive that both she and her would-be lovers end up dead as a consequence of the emotions it provokes. The connection, then, is that both music and murder pertain to mating. One attracts mates. The other disposes of rivals.

Shopping, that most urgent and tiresome activity at this time of the year, may seem to have little to do with either music or murder, beyond the mindless jingles in every store that provoke a desire to dispose of the manager who chose the playlist. But it, too, helps propel the genes of the successful into future generations. As surely as the tasty morsel that the male robber-fly offers up to his chosen mate, the jewels, champagne and scent that a man showers on a woman speak of his prowess as well as her desires. The Jaguar in his driveway, meanwhile, serves to emphasise his status to other men. A Fiat would get him there as fast, but only to physical destinations, not sexual ones.

Justice for all

These observations may seem commonplace, but they are actually quite profound. People's enthusiasm for singing and shopping supports huge industries. Murder is rarer, but also fascinating, as the detective stories that clutter both airwaves and bookshops attest. The hold that all three have over mankind is best explained by an idea that has gone out of fashion in the groves of academe over the past few decades, but is now due for a revival: that there really is a human nature, and that it is worthy of proper, scientific investigation.

That music (see article), shopping (see article) and murder (see article) are topics covered in our special Christmas articles is no coincidence. Next year is the 150th anniversary of "On the Origin of Species". Until 1859, human nature was the province of God. It was Charles Darwin's famous book that brought it into the realm of scientific discourse, and it is Darwinism that ultimately explains all three.

Darwin became unfashionable among *bien pensants* because of a reaction to the excesses of eugenicists, racists and "social Darwinists" who misused his theories. Darwinism seemed to emphasise the darker sides of human nature, and that sat uncomfortably with socialism. Yet man is an evolved species. His behaviour makes no sense unless its evolution is comprehended. In any case, evolution explains not just the nasty aspects of humanity, but also the nice ones.

Music, and also art, fashion and even literature, are reckoned by many Darwinists to be the human equivalent of the peacock's tail; done well, they show off the genetic prowess of the creator. Similarly, the impulse for self-improvement that creates economic growth comes from the need to be more attractive to the opposite sex than your rivals. And, most profoundly, modern Darwinists reckon that a sense of justice, too, is probably an evolved phenomenon.

The notion that bad individuals should not be allowed to prosper does not exist in most species, yet it has been crucial to human evolution. It permits collaboration and has thus done as much as language and culture to allow human civilisation to flourish and people to dominate the planet.

A sense of justice argues that people should be free to keep the fruits of their labours, but also that the over-mighty rich need to be cut down from time to time and the poor occasionally exalted. It damns the murderer while recognising that, sometimes, even murder is justified. The perverted bargain with justice which Tosca makes is the heart of the opera's tragedy. A sense of justice, then, reins in people's other Darwinian instincts and curbs their excesses. For human nature has evolved to be both good and bad—and it is evolution that allows human nature to know the difference.

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On indigenous people, Turkey, RUSAL, asteroids, pensions, words, James Bond

Dec 18th 2008
From The Economist print edition

Changing customs

SIR – It is disheartening to see that despite evidence to the contrary, the myth of the noble savage continues to surface in serious debates. Your articles ("Unbearable pursuits", "The other Brazil", November 22nd) quoted, respectively, Inuit hunters and a surgeon paying homage to the idea that indigenous people always know best about their environment.

Although that notion is politically appealing, those endorsing it never seem to consider that traditional knowledge was accumulated under conditions vastly different from those that are faced today. The Inuit have no conventions to deal with situations they have yet to face, such as the complete disappearance of ice in the Arctic during the summer. And the Ticuna in the Amazon jungle are new to the benefits and perils of life on the reservation. While the Amazon is vast, it cannot indefinitely absorb a growing Ticuna population any more than it can absorb Brazil's poor farmers.

By definition, traditions evolved in the past. They carry no guarantee of success in the future, especially when employed under novel circumstances. I can imagine my Indo-European ancestors sitting around the fire shouting down the dissident voice who wondered if they might someday see an end to the great herds they hunted. The archaeological record is littered with evidence of the failures of non-industrial societies to develop traditions that would conserve animal populations.

Nations may have a stake in the conservation of their natural inheritance, but it seems foolhardy to discount Western science in favour of traditional environmental knowledge and local property rights; this can only lead indigenous people down the path towards environments that will no longer support them.

William Thomas
Director
New Jersey School of Conservation
Montclair, New Jersey

SIR – You demonstrated a complete disregard for facts and were unabashedly antagonistic towards Inuit culture. For instance, you claimed that there are "only" 1,500 polar bears in Baffin Bay, yet the area has not undergone a complete biologists' survey in over ten years. Current "scientific" population estimates are extrapolations from a statistical model, not real data.

Nor do Inuit systematically overestimate polar-bear populations, as you suggested. A three year, $3.5m survey, completed in 2007, calculated the Davis Strait polar-bear population at 2,200. It was estimated at 1,650 using traditional Inuit knowledge. The Davis Strait subpopulation is directly south of the Baffin Bay subpopulation, with no distinguishable barriers to polar-bear movement.

Moreover, you were very condescending towards Inuit and our efforts to regain control of our destiny. As you noted, "In Nunavut, mistrust of outside experts is huge." With "experts" like you it is not difficult to understand why. Perhaps if we gave our hunters lab coats we would be taken more seriously.

Gabriel Nirlungayuk
Director of wildlife
Nunavut Tunngavik Inc
Rankin Inlet, Canada

Turkey and the world

SIR – Your report on Turkey's prime minister contradicted the real situation ("The worrying Tayyip Erdogan", November 29th). No one can question the dependability of Turkey as a Western ally. Relations between Turkey and the United States are based on a strategic partnership and for more than half a century Turkey and America have enjoyed ever-strengthening co-operation based on shared values and mutual trust.

On the Kurdish issue, the government has invested $12 billion in the region, and has announced a major economic package to complete the south-eastern development project (GAP). And having passed laws that for the first time allow the Kurdish language to be spoken on radio and television, the Turkish state broadcaster (TRT) will start airing Kurdish programmes on January 1st. The prime minister, Recep Tayyip Erdogan, and the Justice and Development (AK) Party have formed the most reformist and liberal government in Turkish history and represent the true face of modern Turkey, where individual freedoms need to be respected for all and where all citizens enjoy an advanced democracy.

A biased argument based on a rumour about a deal between Mr Erdogan and the chief of staff, Ilker Basbug, does not reflect the truth and misleads your readers. Moreover, labelling the AK Party as "Islamist" is groundless. The AK Party is not Islamist, but a centrist-conservative, democratic political party.

Egemen Bagis
AK Party vice-chairman in charge of foreign affairs
Turkish Parliament
Ankara

An aluminium company

SIR – Your article about the impact of electronic communications on environmental protests against companies made interesting reading, but a clarification in relation to UC RUSAL is in order ("Revolutions coloured green", November 22nd). We do not believe that recent protests in Guinea were directed at RUSAL's own activities. Our bauxite mines and alumina refinery are subject to regular inspections for environmental compliance and there have not been any concerns identified recently in the region.

Moreover, at a recent meeting between the Russian minister of natural resources and ecology and the Guinean minister for mines and geology, RUSAL's operations were welcomed as a successful example of foreign investment in the industrial and social development of Guinea.

We are convinced that the protests in Moscow to which you referred were part of a paid-for dirty-tricks campaign against RUSAL, which has nothing to do with the environment or people power. RUSAL has always been proactive in its environmental efforts and is open to co-operation with NGOs and communities, whether local or online.

Vera Kurochkina
Director of public relations
UC RUSAL
Moscow

Celestial bodies

SIR – Short of a space elevator—another one of Arthur C. Clarke's splendid creations—putting stuff into orbit will always be expensive ("Let the sun shine in", December 6th). Rather than build and then launch, we should launch and then build using materials that are already in space: near-Earth asteroids. Pan-STARRS, a telescope in Hawaii for observing asteroids, and the Large Synoptic Survey Telescope, under development in Arizona, will reveal hundreds of thousands of these space rocks, 10% of which are easier to reach than the moon. Many are rich in mineral wealth.

William B.C. Crandall
Founder and president
AbundantPlanet.org
Redwood City, California

The other side of the coin

SIR – I imagine that most governments that allow tax deductions for payments into personal pension plans also require the beneficiaries to start withdrawing at a certain age. I had to do so over ten years ago and as you rightly say, it has been a lost decade ("Where have all your savings gone?", December 6th). I recently converted the pitiful remnants of my savings into an annuity merely to provide some modest security, and as a consequence my income next year will be cut by over a third.

There must be hundreds of thousands of people in the same situation, and while I read of governments bailing out the financial sector for its incompetence and greed, I have yet to hear of anyone proposing to bail out the innocent victims. Providing tax credits and the like are of no great help when the current normal deductions leave one with virtually no taxable income anyway.

Peter Weinrich
Victoria, Canada

Polite persiflage

SIR – In response to the reader who asked for more "pellucidity" from Bagehot, I would rather ask him to get a bigger dictionary than require yet another British institution to dumb down (Letters, December 6th). Bagehot's vocabulary is certainly pellucid, in that the words mean exactly what he intends, unlike the mysterious utterances of adolescents or the various impenetrable professional jargons of today.

Hilary Potts
London

SIR – I was intrigued by the absence of "rebarbative", "jejune" and "ineluctable" from the reader's "Concise Oxford English Dictionary". On consulting my version of that estimable work I found all three defined therein; but as mine is the 1964 edition can we deduce something about Bagehot's age? A more modern reference source, my computer spell-checker, does not recognise "rebarbative", illustrating, for good or ill, the ineluctable development of language.

Colin Spackman
Wellington, Somerset
(Editor's note: Bagehot is a mere 34)

SIR – I do not mean to be curt at all, but I would like to suggest for those who have difficulty comprehending Bagehot to invest in a dictionary without the word "concise" embedded in the title.

Luke Mansillo
Sydney

SIR – Other phrases used by Bagehot in the column (November 15th) to which the reader referred included "talismanic importance", "enervatingly old", "doughty prime minister", and "brazen intellectual heist". This can only contribute to a heightened enjoyment and awareness of the breadth and scope of the English language. Should, however, I ever see in print the abysmal solecisms articulated, not infrequently, by the albeit eloquent Barack Obama ("for Michelle and I") I shall not hesitate to cancel my subscription as "rebarbative" will at last have cogent application to my sensibilities.

Reece-Jane Freeman
Worcester, Massachusetts

SIR – Editors at ITV (not knowingly Britain's most intellectual television channel) allowed the words "rebarbative" and "egregious" to be said in the space of a minute in their recent drama series "Lost in Austen". Bagehot is obviously just trying hard to stay ahead of a deepening curve.

William Scott
Trowbridge, Wiltshire

A Christmas drink

SIR – As one who closely associates my adolescence with memories of watching Sean Connery as 007 I was much shaken by your off-the-cuff assertion that James Bond's champagne of choice was Bollinger ("Losing its fizz", December 6th). As proof of the powerful mental imprints left over from puberty I was instantly assailed by images of Bond drinking Dom Perignon, not Bollinger.

It is true that Bollinger has been the Bond champagne of choice ever since "Moonraker" in 1979, but most fans would agree that this was the point when 007 films began to go downhill, becoming increasingly flashy and absurd. Daniel Craig is redeeming the situation somewhat, even though he can be seen driving a Range Rover in "Quantum of Solace" (is Bond picking up the kids from school now?). He should stick to the Aston Martin. Bollinger with Denise Richards or Dom Perignon with Barbara Bach? Need I say more?

Bruce McLaren
Chapel Hill, North Carolina

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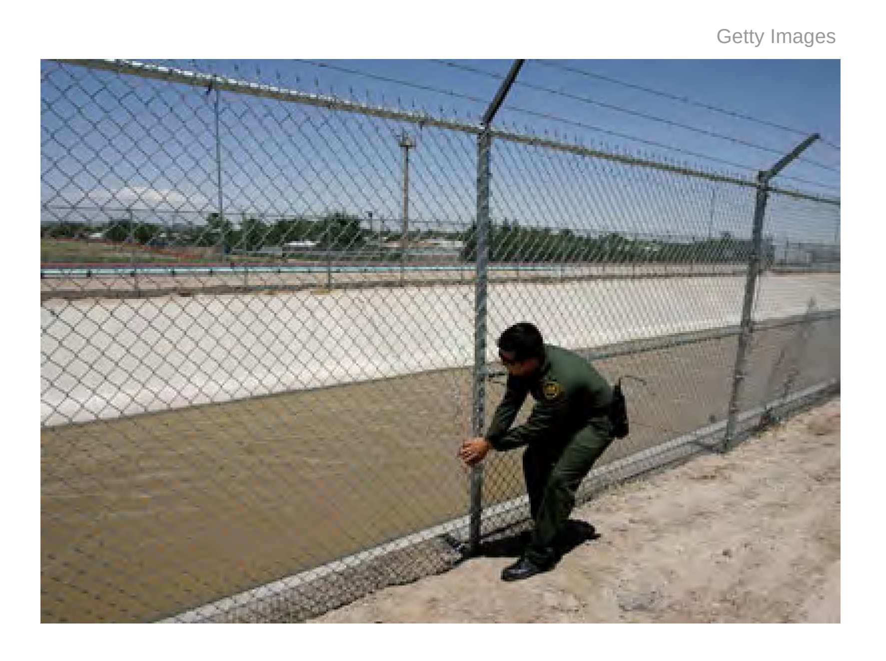
Immigration

The border closes

Dec 18th 2008 | LOS ANGELES
From The Economist print edition

Tougher enforcement and the recession have cut the flow of immigrants; but the state of the economy has made it harder to overhaul a broken system

Getty Images



UNTIL recently, most of the people who came to Emilio Amaya's office in San Bernardino were working illegally. Now the flow of immigrants has slowed, and those who used to toil on building sites and in restaurant kitchens are taking long breaks to visit their relatives. Fortunately, a new line of business has emerged. Mr Amaya is helping people fill in forms that will enable them to move their possessions back to Mexico.

It is an abrupt reversal of a once seemingly inexorable trend. Ever since 2002, when America began to recover from a mild economic downturn, migrants both legal and illegal have streamed over the border. By 2006 Americans rated immigration as the nation's second-most-important problem after the Iraq war, according to Gallup. A bold attempt to reform immigration laws the following year was scuppered by an extraordinary outburst of popular anger. Yet, almost at that moment, the problem began to go away.

The least desirable kind of immigrant has declined the most steeply. In the year to September 2008 724,000 fewer people were caught trying to cross into America from Mexico, the lowest annual tally since the 1970s (see chart). Border cops have naturally claimed credit for the drop. But the heavy hand of the law is probably much less of a deterrent than the invisible hand of the market.

Adiós al Norte

Southern Border Patrol illegal-immigrant interceptions, m

1.8
1.6
1.4
1.2
1.0
0.8
0.6

2000 01 02 03 04 05 06 07 08

Fiscal years ending September 30th

Source: Department of Homeland Security

Illegal immigrants often work as builders and landscapers, two trades that have collapsed along with the housing market. As the most casual workers in any industry, they are often laid off first. Although it is impossible to say how many are out of work, one clue comes from their closest competitors in the labour market. In the past year the unemployment rate among Hispanic Americans has risen from 5.7% to 8.6%. That is a steeper increase than for whites or blacks.

In some places, such as Arizona, tough penalties for companies

that hire illegals have made the situation worse. Edmundo Hidalgo, who runs a Hispanic organisation in Phoenix, says employers who are prepared to wink at illegality in a tight labour market become more scrupulous when there are lots of workers to choose from. Not surprisingly, the Arizona border is particularly quiet these days. “Why risk your life to come and be unemployed?” asks Wes Gullett, who steered John McCain’s presidential campaign in Arizona.

Jeffrey Passel, a demographer at the Pew Hispanic Centre, estimates that the number of illegal immigrants in America fell by 500,000 between 2007 and 2008. Some left the country; others worked their way to legitimacy. Few were replaced. For the past three years, Mr Passel reckons, there has been more legal than illegal immigration—a reversal of the previous pattern. And even legal immigration may now be falling.

Gabriel Jack, a Silicon Valley immigration lawyer, says companies are requesting fewer visas for foreign workers, although demand for the most popular permits still outstrips supply. Tourism and business travel seem to have declined, too. Fewer people are flying into and out of America than at this point last year, according to the International Air Transport Association. All of this changes the politics of immigration.

Tricky politics

During the presidential campaign Mr Obama promised to tackle immigration reform in his first year in office. He has a sound reason for keeping that promise: Latinos are solidly Democratic. Exit polls for CNN suggest that Mr Obama carried Hispanic voters by 28 points in Texas, 51 points in California and 54 points in Nevada. By 2012 the Hispanic electorate will be bigger and the heavily Latino Western states will command a few more electoral-college votes, thanks to the 2010 census, which will give extra congressional seats to the West.

The abrupt slowdown in human movement might seem to improve the odds that America’s broken immigration system will be overhauled soon. What do nativists have to fear, if fewer people are trampling the border and some undocumented workers are going home? In fact, though, immigration reform is becoming harder.

The immigration bill that died in 2007 would have legalised undocumented workers, stepped up enforcement of existing laws and increased the supply of immigrant workers. It was a compromise that offered something to liberals, Hispanics, conservatives and businessmen.

The recession has swept away the third part of the grand bargain. Even 18 months ago some Midwestern Democrats (including Mr Obama) were wary of a guest-worker programme. It will be extremely hard to sell an increase in foreign workers during a recession. Doris Meissner of the Migration Policy Institute in Washington notes that the last two major relaxations of immigration laws, in 1965 and 1990, both occurred at times of low unemployment.

If there is to be no grand bargain, lesser steps may be taken. Farmers, who have political clout and a perpetual hunger for cheap labour, may be allowed to hire more seasonal workers. “Americans still aren’t rushing to pick lettuces in 115º heat,” notes Glenn Hamer, president of Arizona’s chamber of commerce. The DREAM Act, which would enable some illegal aliens who were brought to America as children to become residents, may be revived.

But if no provision is made to increase the supply of foreign labour permanently, the immigration issue will come back once business picks up again. As Tamar Jacoby of ImmigrationWorks USA, a pressure group, puts it, efforts to secure the border and to police unscrupulous employers will have to compete against the dynamism of the world economy. Don’t count on the cops to win.

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Barack Obama's BlackBerry

Subject: Iran

Dec 18th 2008
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Another e-mail from the president-elect's inbox



"THE toughest decision you have to make about Iran is whether you are willing in the final resort to attack its nuclear facilities to stop it getting a bomb. Everything else flows from that call.

John McCain said the only thing worse than a war with Iran would be an Iran with a bomb. If diplomacy fails, you do have a military option: bombing the uranium-enrichment facility in Natanz and other plants would set back Iran's programme a year or three and put the mullahs on notice to expect more if they tried again. But if we attack we cannot rule out a big response: missiles on Israel, terror attacks on our forces in Iraq and Afghanistan, strikes on oil shipments through the Gulf. Of course, we can respond to their response. But as a president elected on a peace ticket you would need all this like a hole in the head.

Besides, the McCain dictum is debatable. What's Iran going to do with its bomb? If it drops it on Israel it's committing suicide. Mutual assured destruction deterred the Soviets, didn't it? True, a nuclear Iran will be a bolder Iran, tempted to push even harder against our interests in Iraq, the Gulf, Lebanon and Palestine. But we have ways to push back. We could, for instance, extend our nuclear umbrella beyond Israel to our Arab friends.

If you decide it's better to let Iran get its bomb than to risk bombing it, we don't have to tell anybody for a bit. Pretending to keep a military threat on the table while trying to talk or bribe Iran out of going nuclear is not a bad policy. But be under no illusion: it's the policy the previous administration tried too, with zero results. You've promised bigger carrots and threatened bigger sticks. But President Bush and the Europeans tried a good-cop, bad-cop routine and Iran ran circles round them both. To get the Russians behind tougher sanctions you'll have to give them something big, like dropping the idea of missile defence for Europe.

One new idea you bring to the table is the offer of direct talks. Some of our people think there's a "grand bargain" to be had with the mullahs. (Others, though, reckon they want to get their bomb first, and the bargain later.)

It might work; but there's not much time. Within a couple of months of your inauguration Iran could have enough low-enriched uranium for one bomb, once the stuff has been boosted (this could take less than another two months) to weapons-grade. We don't know how close Iran would then be to a working device, but its chances of getting a bomb in the first half of your first term are high. In all likelihood, you will have to decide—bomb or deter—quite soon.

Oh, and the Israelis know all this as well. We need to warn them again not to go it alone in the hope of dragging us in to finish the job. If diplomacy fails and you decide that the military option is in the end the lesser evil, at least let it be our decision, not theirs."

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Education

B+ for the new boy

Dec 18th 2008 | CHICAGO
From The Economist print edition

Barack Obama's education secretary is a diplomatic reformer

DURING the election campaign the economy submerged most talk of education. But beneath the surface, a debate churned between the self-proclaimed reformers and the teachers' unions. By choosing Arne Duncan, Chicago's schools chief and one of his own basketball buddies, Barack Obama this week has managed to please both sides.

School reformers had been edgy for weeks, noting that Mr Obama's transition team included Linda Darling-Hammond, an education professor at Stanford University. Ms Darling-Hammond is a vocal critic of No Child Left Behind (NCLB), the federal law that promotes testing and accountability. Many feared that she would nudge Mr Obama towards the unions or even become education secretary herself.

If Ms Darling-Hammond represented one end of the debate, at the other extreme were Joel Klein and Michelle Rhee, chancellors of the school systems of New York and Washington, DC, respectively. Both have supported charter (independently-run but government-funded) schools and paying teachers by results. Both have championed tough accountability. But both have infuriated unions, and Mr Obama has opted not to pick a fight.

That is not to say that Mr Duncan is a poor choice. The president-elect has chosen the rare reformer unions can stomach. In Chicago Mr Duncan raised the share of students who meet or surpass state standards from 38% in 2001 to 68% last year. He has closed failing schools and reopened them with new staff. His Renaissance 2010 initiative has opened 75 new schools, including 67 charters, in some of Chicago's bleakest areas. Yet Mr Duncan was never as tough as Mr Klein or Ms Rhee.

Chester Finn of the conservative Thomas B. Fordham Institute calls Mr Duncan "a terrific pick", and Margaret Spellings, George Bush's education secretary, calls him "a kindred spirit". But Randi Weingarten, president of the American Federation of Teachers, declared herself "pleased" by the choice. The worry is that the effort to reach consensus may hinder bold change. But at least Mr Duncan may restore the spirit of co-operation that helped pass NCLB in 2001. Mr Obama, in his announcement, criticised advocates who fail to realise that "both sides have good ideas and good intentions". The president-elect is a master at charting the middle road. Time will tell whether that path leads to meaningful reform or to messy drift.

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Cheap skiing

Slippery slopes

Dec 18th 2008 | WHITE RIVER JUNCTION, VERMONT
From The Economist print edition

Skiers opt for New England instead of the Rockies

AP



Give my regards to Aspen

AMERICA'S 481 ski resorts did very well last year. At least 10% more visitors came than in 2006. Record snowfalls attracted snow bunnies (novice skiers), butt-draggers (novice snowboarders), shredders (accomplished snowboarders) and rippers (accomplished skiers). This year, though, is not looking anything like as good, at least for the fancy resorts out West. Snow levels are down in the Rockies, but the big problem is the economic storm.

Wall Street types, who last year thought nothing of shelling out $20,000 for a little winter fun, are cutting back. Vail Resorts, which owns four resorts in Colorado and one on the California-Nevada border, recently announced losses of $34.5m. Its advance bookings are down 23% from a year ago. With flights still pricey but petrol prices dropping, skiers and snowboarders would rather stay closer to home and drive. "It's a lifestyle sport. It defines who they are. They are still going to ski," says Jeff Wise of Stowe Mountain Resort, in Vermont. But perennial visitors to places like Aspen, a high-end ski resort town in Colorado, are opting to stay on the east coast.

That is good news for some. Jen Butson, of the Vermont Ski Areas Association, says she has seen a 15-17% increase in sales of season tickets. Vermont is ski central in New England, with some 80m people living within 350 miles (560km) of the state. Most come from Massachusetts, with a fair crowd hailing from New York and Connecticut. A growing number are even driving down from Canada.

Mount Snow, only two-and-a-half hours by car from Boston, has seen a jump in drive-up business. Will Marks of JMP Securities, who tracks the ski industry, notes that many people are now "trading down". Skiers who once went to Vail may now opt for Vermont's Stowe which, despite just opening a luxury mountainside hotel, costs a lot less.

The Westerners are not about to give up. Lake Tahoe in California, and even some of the resorts near Denver which rely less on airborne customers, are in better shape to weather the frigid economic conditions. And resorts out West are offering a flurry of deals to entice skiers and snowboarders to get on a plane. Aspen recently announced a deal where children fly free. Park City and Snowbird in Utah let some children ski free. Some resorts are giving away free lift-passes, and others are offering a third or fourth night of lodging free. Regardless of the state of the economy, skiers will still enjoy the slopes. Just not as lavishly as they used to.

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Visiting the Capitol

Nobody does it better

Dec 18th 2008 | WASHINGTON, DC
From The Economist print edition

When it comes to mismanagement, Congress is hard to beat

IF THERE is one thing Congress excels at, it is finishing its tasks late and over budget. It delivered most of its 2008 budget three months late. In September it failed to pass, first time round, the Troubled Asset Relief Programme, which gave the Treasury wide authority to intervene in distressed financial markets; the Democrats had to add a slew of sweeteners to muster enough votes the second time. But nowhere has Congress's penchant for inefficiency been more manifest than in the new Capitol Visitor Centre, a 580,000 square foot (54,000 square metre) subterranean hall lined in white marble, which has just opened next to the Capitol itself.

The original intentions were good. For years, crowds eager to enter the nexus of American democracy have had to wait in long lines snaking around the building's scrubby gardens. This has been a particularly unpleasant business in the summer months, when the heat and humidity are unyielding, and one that resulted in a lot of sweaty tourists then tramping around the hallowed spaces. No longer will senators and their staffs have to cope with the smell, a relieved Harry Reid, the Senate majority leader, proclaimed earlier this month. With the opening of the centre, sightseers will pass through metal detectors and queue up for tours amid air conditioning and plentiful lavatories. While they wait, they can admire some of the statues originally sent in by various states for display in the Capitol proper, such as Hawaii's gold-covered King Kamehameha.

This is certainly more pleasant than the heat. But at $621m, the centre has cost more than twice the amount budgeted. And even all that cash failed to get the thing built on time: the east front of the Capitol was an ugly construction site for four years longer than scheduled. As continuing tales of private-sector malfeasance inspire new proposals for regulation and federal programmes, the centre is a reminder of government's limitations.

Nor, it seems, can Congress do something as simple as opening a visitor centre without embroiling itself in the culture wars. Southern Republicans complained that the hall did not prominently display the national motto, "In God We Trust", and that the exhibits were "left-leaning". At least two references to a higher power have since been added, illustrating another habit for which Congress is more creditably famous: compromise.

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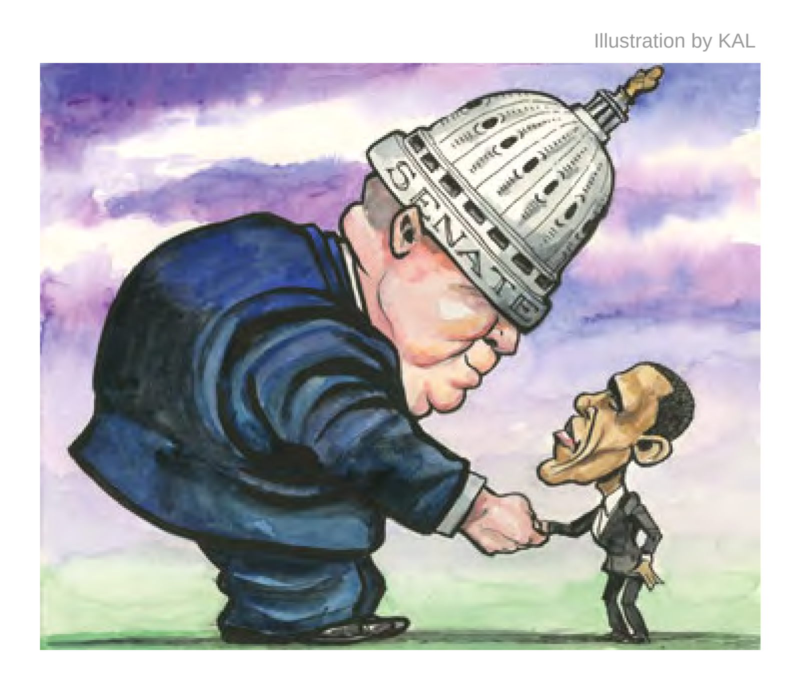
Lexington

Shenanigans and seriousness

Dec 18th 2008
From The Economist print edition

The road to a successful presidency runs through the Senate

Illustration by KAL



A CENTURY ago, the Senate had many detractors. It was a club for millionaires with a culture of alcoholism, writes Lewis Gould in "The Most Exclusive Club: A History of the Modern United States Senate". Grover Cleveland's wife is said to have roused him from slumber with the words: "Wake up! There are robbers in the house." The president replied: "I think you are mistaken. There are no robbers in the House, but there are lots in the Senate." Around the same time, a senator from Maine named William P. Frye lamented that "there are several in our distinguished body who hold their seats by purchase."

Is today's Senate any better? Those who say no have seen plenty of recent evidence to buttress their case. Ted Stevens of Alaska was caught trousering gifts from contractors. David Vitter and Larry Craig were caught with their trousers down (though Mr Craig maintains that his were lowered for legitimate reasons). A couple of senators are accused of accepting cut-price loans from a lender they should have been regulating more vigilantly. And Frye's lament about the way vacated Senate seats are filled could hardly sound more contemporary.

Last week, investigators alleged that the governor of Illinois tried to sell Barack Obama's seat to the highest bidder. Before that, the governor of Delaware appointed one of Joe Biden's most trusted aides to the seat Mr Biden is abandoning to become vice-president. The scuttlebutt is that the aide will step aside in 2010 to make way for an election bid by Mr Biden's son, currently serving in Iraq. Should new senators really be selected from the families of old senators? Caroline Kennedy thinks so. This week, she announced her desire to take over Hillary Clinton's Senate seat without the bother of an election. Ms Kennedy has never held public office, but her uncle Ted is a senator. Her late uncle Bobby was a senator, too, as was her father, John Kennedy, before he became president. No one doubts that Ms Kennedy has name-recognition. But, as a grumpy congressman from Queens pointed out, the same could be said of Jennifer Lopez. Besides her name, Ms Kennedy's principal qualification appears to be her friendship with Mr Obama. New York's governor has yet to announce his choice. Another leading candidate is Andrew Cuomo, the son of a governor and ex-husband of yet another Kennedy.

A deeper worry about the Senate is that it is not very democratic. Each member of the House of Representatives represents roughly the same number of voters. In the Senate, by contrast, every state

gets two seats, regardless of its population. So Wyoming's 500,000 citizens enjoy exactly the same clout as California's 37m. Small wonder the Senate lavishes so much public cash on pointless projects in empty hamlets. With a huge stimulus package in the works, expect it soon to dump truckloads more banknotes on rural roads and bridges.

To amplify the unfairness, senators have the power (not to mention the verbosity) to talk a bill to death. It takes 60 votes out of 100 to end a filibuster, so 41 senators can block almost anything. If the least-populous states ganged together, senators representing 11% of the population could theoretically thwart the will of the other 89%. This kind of power has often been used for ill. Southern Democrats filibustered to keep the segregationist Jim Crow laws alive. Rural senators today ensure that wasteful, trade-distorting, ally-enraging farm subsidies will never die.

Yet the Senate has virtues as well as vices. As well as slowing the legislative process, it often makes it more thoughtful. When the House passes a bill in hotheaded haste, the Senate cools it down. In a country as vast and diverse as America, there is something to be said for making it hard for the central government to impose sudden, radical change on everyone. And the excruciating difficulty of getting anything controversial through the Senate forces lawmakers to sit down and take account of opposing views. On December 11th, for example, Senate Republicans blocked a bail-out for Detroit's carmakers. This thwarted the clearly expressed will of majorities in both the House and the Senate. But it was the right thing to do. A bail-out would either delay inevitable restructuring or (worse) put Congress in charge of it. The bail-out's advocates will try again. But they will have to come up with a more plausible plan.

Power to the centrists

Next year the Democrats will have large majorities in both arms of Congress, but not quite enough seats in the Senate to shut down filibusters and make Republicans irrelevant. The Senate will thus be the second-toughest check on the new president, after the rapidly emptying Treasury. But Mr Obama's lack of a crushing Senate majority could actually help him govern better. If the Democrats had 60 seats, Mr Obama's supporters would expect him to sign a bunch of narrowly partisan bills. Since they don't, such bills won't reach his desk. If, for example, his fellow Democrats try to abolish the right to a secret ballot before a workplace is unionised, Senate Republicans will stop them.

The biggest and best reforms of the past have usually been bipartisan—think of the Civil Rights Act in 1964 or welfare reform in 1996. Mr Obama, too, has a better chance of changing America for the better if he reaches across the aisle. Take health care. He cannot substantially and permanently expand coverage (a Democratic priority) unless he also tackles soaring health-care costs (a Republican one). Or take climate change. It would be politically suicidal to force higher energy prices on Americans without bipartisan cover. There are plenty of moderates in the new Senate, from Olympia Snowe and Susan Collins on the Republican side to Mark Warner and Claire McCaskill on the Democratic one. Charlie Cook, a political analyst, counts at least 23 centrists, who will in effect hold the balance of power. Mr Obama should work with them. He may find a useful ally in his old sparring partner, John McCain.

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Brazil's foreign policy

The samba beat, with missteps

Dec 18th 2008 | SÃO PAULO
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It may be the rising power in the Americas but Brazil is finding that diplomatic ambition can prompt resentment

EPA



THE symbolism was clear. With the United States at the fag-end of a disastrous presidency, Brazil assembled 33 countries from across the Americas to discuss a host of issues ranging from defence to the economic slowdown. The two-day gathering, at a resort near the northeastern city of Salvador, marked the first time that every country in Latin America and the Caribbean had met without the presence of the United States or Europeans. The message: it is Brazil, with a growing economy and a popular president in Luiz Inácio Lula da Silva, and not the United States that is now the leading power in the region.

But the substance was slight. The get-together involved three separate meetings, at each of which fraternal wishes were overshadowed by political differences. The members of Mercosur, which is meant to be a customs union, were unable to agree on rules for importing goods from outside the block. The members of Unasur, a fledgling South American political union, set up a defence council intended to defuse conflicts. But they failed to choose a secretary-general for Unasur.

The wider gathering was notable for the presence of Cuba's Raúl Castro, making his first trip abroad as the communist island's head of state. That stimulated the usual anti-American rhetoric from some leaders. But as usual, too, Brazil's message was more subtle. "We want to have a good relationship with the United States. But we…don't depend on external tutelage," said Celso Amorim, the foreign minister.

Lula's government arrived in office in 2003 with three main foreign-policy aims: to secure a permanent seat on the United Nations Security Council; to get a world trade deal; and to create a powerful South American block. All this was to be brought about in a spirit of partnership with other developing countries.

Trade and other ties in Africa and Asia have indeed been strengthened. Brazil has successfully led the UN mission in Haiti. But in other respects, the record has been one of frustration. China was prominent in blocking reform of the Security Council (to stop Japan joining). Despite Brazil's best efforts, the Doha trade talks have stalled.

Regional integration has proved complicated. Within Mercosur, barriers to trade are multiplying rather than lapsing. An agreement to bring in free trade in cars by 2007 has been postponed. The countries that

form the pact (Argentina, Brazil, Paraguay and Uruguay) failed to adopt a common stance in the Doha talks.

In Lula's first term, Brazil was noticeably warm towards some of the far-left regimes in the region, backing Venezuela's president, Hugo Chávez, and turning a blind eye towards his hollowing out of democratic institutions. Foreign policy was used as a way to send signals to supporters of the Workers' Party that Lula's was a real left-wing government, even if its economic policies were orthodox, says Sérgio Amaral, a former ambassador and minister in a previous administration.

But Lula's pledge that Brazil would be generous to smaller neighbours to boost integration has not always been reciprocated. He was embarrassed when, with Mr Chávez's active encouragement, Bolivia's socialist leader, Evo Morales, nationalised the operations in his country of Petrobras, Brazil's energy giant, in 2006. Brazil's diplomats say that rising economic power means that at every meeting on trade, they are confronted with a demand to do more for their neighbours. "Perhaps by being so tolerant we have actually been patronising," says one diplomat.

That has led to a tougher approach. Left-wing presidents in Ecuador and Paraguay with grievances against Brazil are getting a sharper response. In September Ecuador's president, Rafael Correa, expelled managers of Odebrecht, a Brazilian engineering company which he accuses of bribery and shoddy construction of a power plant. He is refusing to repay a $243m loan for the plant from Brazil's national development bank. (Ecuador also defaulted on some of its bonds this month.)

That led Brazil to recall its ambassador. It has brushed off demands from Fernando Lugo, Paraguay's new president, to renegotiate a treaty under which his country sells Brazil electricity. Brazil never criticises Mr Chávez in public but it increasingly seeks to outflank him. One way of doing that while also doing business involves closer ties with Cuba.

This week's meeting may be the germ of a new pan-Latin American club. But despite much bonhomie, regional harmony remains elusive. The United States will soon have a popular new leader, who will doubtless be the star of a 34-country (all except Cuba) Summit of the Americas in Trinidad in April. Brazil has indeed become much more influential in the region. But its is not the only game in town.

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The mayor of Mexico City

Backroom boss

Dec 18th 2008 | MEXICO CITY
From The Economist print edition

The left's moderate radical

IT IS an unlikely place for the world's largest artificial ice-rink. But this month for the second year in a row the Zócalo, Mexico City's main square, is abuzz with skaters. The rink is the brainchild of Marcelo Ebrard, the city's mayor. Like several of his initiatives, it is practical and popular—the hallmarks of a politician who may be the best hope for Mexico's deeply divided left.

Mr Ebrard took office two years ago as the protégé of Andrés Manuel López Obrador, who, after a term as mayor, narrowly lost the 2006 presidential election to Felipe Calderón. Both men began their political careers in the formerly ruling Institutional Revolutionary Party (PRI) before joining a left-wing breakaway, the Party of the Democratic Revolution (PRD). But in other ways they differ greatly.

Mr López Obrador's refusal to accept electoral defeat, and his branding of Mr Calderón as "illegitimate", has divided and discredited his party. Whereas he is an orator and agitator of the streets (his protest occupied the Zócalo for months), his successor operates behind the scenes. He never criticises his former boss openly, but Mr Ebrard is a more conciliatory figure for whom "conflicts have their limits".

He has gradually emerged as his own man. To match the winter ice-rink, he created a Parisian-style archipelago of artificial beaches in the summer. To promote cycling a main avenue is closed to traffic on Sundays. He says he wants to set up 400km (250 miles) of cycle lanes. On his watch, Mexico City has become one of the first places in Latin America to ban smoking in bars and restaurants; it is also one of the few places where abortion is legal. The mayor recently promised free Viagra to men over the age of 70. He has also managed to move some 15,000 street vendors out of the city centre—a tricky operation given that they have traditionally formed part of the PRD's political clientele.

But his tenure as mayor will be judged on his success in tackling congestion and crime. An ambitious plan to create a network of dedicated bus lanes of equal size to the 175km metro system is behind schedule (though its second route opened this month). But this does represent a serious attempt to tame the city's traffic problem. A new 25km metro line is also being built. The mayor says he will hire 20,000 extra police during his six-year term. He wants to improve their quality: half will be women, and all will be required to have completed secondary school. They will be offered subsidised housing and scholarships for their children.

Mr Ebrard cautions that the police will not "change overnight". Nonetheless, critics say he has not done enough to clean up a problem-plagued force. José Fernández Santillán, a political scientist at the Tecnológico de Monterrey, a university, says that many newly hired police still had to pay a bribe to get the job. Opponents complain that the city government spends excessively on promoting Mr Ebrard and that contracts have been doled out to his political allies. His supporters deny this.

The PRD is bitterly split between Mr López Obrador's followers and a more moderate faction. Mr Ebrard may be one of the few figures who can bridge the divide. He says that Mexico's deep inequalities mean that the PRD cannot just be a moderate European centre-left party, but nor can it be so radical as to become a movement outside the country's institutions. Mr López Obrador may run again for the presidency in 2012. But provided he succeeds as mayor, Mr Ebrard may turn into a formidable rival to his former mentor.

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Venezuela's alternative currencies

Tokens of utopia

Dec 18th 2008 | RÍO CHICO
From The Economist print edition

A different take on the cashless society

A KILO of ripe papaya from Oliva Unamo's stall at the community market in Río Chico, a small town in the coastal region of Barlovento, will cost you three cimarrones. For the same price, you could buy six sticks of sugarcane at the stall next door. But your cimarrones won't go far at the shops down the road.

The cimarrón is one of at least ten alternative currencies in different parts of Venezuela. They have the blessing of Hugo Chávez, the country's left-wing president. They will help do away with capitalism and hence combat poverty, he says. But none of these tokens can be exchanged for the bolívar, the country's legal currency. Their use is limited to "prosumers"—you have to bring something to sell before you can actually buy anything with them. The markets where they circulate are modest affairs: at Río Chico only a dozen or so products were on sale. But that is not the point.

"It's magic," says Pablo Mayayo, an Argentine who is advising Venezuelans on these schemes. "When you take away money, which is the cause of almost all the great evils in the world, people relate to each other in a different way, by co-operating, not competing."

The revolutionary spirit seems to be flourishing among the prosumers of Barlovento. "I grow coconuts," says Angenia Hernández. "In the shops they cost 3.5 bolívares each ($1.63 at the official exchange rate), but we're going to sell them at [the equivalent of] 1.5." It is, she says, a way of "putting an end to commercial fascism."

Lewes and Totnes, two towns with radical traditions in southern England, both have community "pounds" aimed at encouraging shoppers to buy local products. But they can be exchanged for sterling. The other difference in Venezuela is that the alternative currencies are not local initiatives but have been decreed from the top as part of Mr Chávez's drive to impose "21st-century socialism". Few people in Río Chico, small though it is, had heard of the market. The prosumers were bused in by the government from nearby villages.

According to José Guerra, the former head of research at the country's Central Bank, the cimarrones are a regressive echo of Venezuela's semi-feudal past in which landowners paid their serfs in tokens that could be exchanged only for goods produced or sold on their estates.

Mr Chávez has spoken about requiring farmers to sell a proportion of their products through the prosumer markets. But so far only about 2,000 people have signed up for them. On past form, the president will eventually lose interest. The cimarrón, a curious, circular cardboard token illustrated with a picture of a runaway slave, seems destined to end up as a collectors' curiosity.

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Pakistan

United against the wrong enemy

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From The Economist print edition

Pakistan has made a modest start against the likely culprits of the Mumbai killings. But fulminating against India is more fun

AFP



IF PAKISTAN'S leaders had ever united against Islamist militancy as they have against India over the past three weeks, their country would not be the violent mess that it is. Ever since India alleged, with subsequent corroboration from America and Britain, that Pakistani terrorists carried out last month's mass murder in Mumbai, the country's politicians, generals and fire-breathing journalists have been declaring themselves ready for war—if that's what India chooses.

India's government, despite huge pressure from its own bellicose media, has been more restrained. It has said it does not intend to attack its neighbour. But it has demanded that Pakistan dismantle an anti-Indian militant group, Lashkar-e-Taiba (LET), that has carried out numerous atrocities in India, apparently including the outrage on Mumbai. It has so far relied on diplomacy, particularly through America and Britain, to make this point.

But India is frustrated. Pakistan has taken some steps against Jamaat-ud-Dawa (JUD), an Islamist charity that is a front for LET, which was formally banned by Pakistan, under American pressure, in 2002. But it is not clear at this stage how far they go. On December 11th, a day after the UN Security Council banned JUD, Pakistan said it had also banned it. It has since arrested the group's leaders, including Hafiz Saeed, a professor of engineering, who founded LET and JUD in the 1980s. It has also arrested many JUD activists, sealed scores of the charity's offices and stopped publication of at least six JUD newspapers.

Initially, it also said it would take over the group's many hospitals and schools—allegedly including over 170 schools in Punjab province alone. But it has since seemed to backtrack on this. According to one minister, the government will set up a new charity to run these services. According to a senior official in Punjab, some of JUD's facilities may be left in the same Islamist hands.

They may include a vast jihadist citadel that JUD operates in Muridke, a town close to the Indian border (its entrance is shown in our picture). It contains two schools, for 1,000 children, an Islamic college and a hospital that sees 100 outpatients a day. The campus's manager, a courteous Islamist called Abu Ehsan, said 66 local villages depend on the services it provides, and he trusted that the government would not disrupt them. Shortly after JUD was banned, local police turned up on the campus. But they soon left and Mr Ehsan said he had heard no more from them.

So, for now at least, the schools at Muridke remain free to teach what Mr Saeed has preached for two

decades: *jihad* against Hindu India, especially to drive it from the contested region of Kashmir. It was for this purpose that LET was founded, with support from the army's Inter-Services Intelligence agency (ISI). For two decades, as the army's proxy, it has waged an insurgency in Indian-held Kashmir that has cost over 40,000 lives. Though the ISI appears to have cut back its ties to LET since it was banned, its armouries and military training camps in Pakistan-held Kashmir have remained in place.

The bearded and purposeful men who patrol the campus in Muridke with pyjama trousers hitched halfway up their shins might be graduates of these camps. They have an imposing bearing not usually acquired during teacher training. On the campus, a 12-year-old boarding student, Hamza Nazir, says he likes his school, "because we get Islamic education and we learn how to deal with our enemies." Asked to elucidate, he offers an Urdu proverb: "A hint's enough for a wise man."

Foolishly, then, many Pakistanis, including some of the country's most senior officials, are claiming that JUD is being victimised. "No JUD office is recruiting people for *jihad*," says one of those responsible for closing the group down. Many also say they fear a violent backlash. Others fret that it will be difficult to make a case against JUD's detained leaders, even if India supplies Pakistan with the evidence of their responsibility for the Mumbai attacks that it claims to have. These are legitimate worries. Yet, especially to Indian ears, they are starting to sound like familiar excuses.

In the current spirit of nationalism, it is hard to avoid an impression that many Pakistanis are relieved to be unified against the one enemy they can all agree on, India. By contrast, many remain deeply sceptical about their need to tackle terrorism and a Taliban insurgency at home, despite over 50 suicide bomb blasts in Pakistan last year. To explain these conflicts—though it is a stretch—it has become increasingly fashionable in Pakistan to blame them on India. The army seems convinced that India is supporting the Taliban. This makes Pakistanis especially loth to crack down on LET, historically at least their trustiest weapon against India.

This is worrying. So far, Pakistan should consider itself fortunate to have received such gentle handling after Mumbai. In the event of another catastrophic attack, India might be less cautious. Even as it is, great damage has been done. Pakistan really cannot afford anything less than peace with its neighbour. Facing a long war on its north-western border, it cannot keep up its decades-old readiness on the eastern one. Moreover for its moribund economy to grow, it needs urgently to improve trade and investment relations with India.

Asif Ali Zardari, Pakistan's commercially minded president, seemed to recognise this. He had been trying to coax life back into the once successful but now stagnant diplomatic effort to normalise relations between the two countries. But on December 14th India's prime minister, Manmohan Singh, suggested that so long as Pakistan's vicious sometime proxies remain unchecked, this will be impossible.

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Afghanistan

The next surge

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Can more American troops and a new strategy beat the Taliban?

A SURGE of American troops and a rethinking of tactics worked in Iraq. Can the same be done for the troubled mission in Afghanistan? As America draws down in Iraq, it is sending over 20,000 more troops to Afghanistan. A new strategy is also beginning to emerge after months of high-level consultations, and is due to be unveiled in the coming weeks by the Afghan government and the United Nations.

According to officers in the NATO-led force, the first priority will be to reclaim the ring-road, Afghanistan's main artery, around which the main population centres are concentrated. This route was rebuilt with Western aid after the toppling of the Taliban, but has become increasingly dangerous. The sections south of the capital, Kabul, are largely cut off by Taliban insurgents and criminal gangs.



With more Western troops, and the training of a greater number of Afghan security forces, another aim will be to strengthen areas where the government is in danger of losing control. Forty such districts will be the target of a comprehensive military and political effort to stop them from falling into Taliban hands. A pilot scheme involving the first five of these so-called "critical districts" (see map) is due to be set up soon.

Tribal powerbrokers in these areas will be invited to agree to a "contract". The government, backed by international forces, will undertake to provide security, bring economic development and give each tribal council or *shura* (whose members will be paid by the government) a greater say in the running of local affairs. In return, the tribes will promise to expel and deter insurgents, and to provide recruits (probably about 50 per district) for a local force that would perform guard duties.

This has echoes of the "Sons of Iraq" militia that the Americans created in Iraq as part of their successful "surge". It is also akin to the *Arbakai*, tribal forces that historically operated in parts of Afghanistan.

Many elements of this strategy have been tried before; the *Arbakai* concept was proposed a year ago by Britain's prime minister, Gordon Brown, but made little progress. This time around, disparate initiatives will be joined into a single package. The greater number of forces should make the promise of security more credible, and the Afghan government and the UN will be placed at the forefront of the process.

Will it work or will it, like many other initiatives, collapse amid the perennial feuding and corruption of Afghan tribal politics? President Hamid Karzai has lost popularity, and the quality of most of the police and district officials is woeful.

The Afghan army has been built up with some success. But attempts to improve the police have been

unpromising. The Afghan National Auxiliary Police, a local force to be raised by tribal elders, was scrapped this year when it turned out to be a divisive ragtag militia, often biased towards a particular tribe and packed with drug addicts and petty criminals.

Another attempt at reform has been the so-called “focused district development” in which all policemen from a district are taken out for an eight-week training course, re-equipped, and sent back with American soldiers acting as “mentors”. The mentors were supposed to withdraw after a few months, but a year into the programme they have yet not felt able to leave their Afghan charges. NATO says there is a shortfall of about 2,300 mentors.

Afghan and Western officials working in the provinces agree that, if the new approach is to work, the right choice of *shura* members will be crucial. But maintaining these bodies will not be cheap for the Kabul government; the proposed wage for members has already been cut from $200 to $120 a month.

Balancing local factions is notoriously difficult. “The government is weak and people are losing faith,” says Haji Bidar Zazai, an MP from Ali Khail, a proposed “critical district” in Paktia. “We have eight tribes in our district but if a *shura* is not representative of all eight it will never work.”

Relying on tribal structures may work best in the south-east of the country, where the tribes are comparatively stable and cohesive. In the south, however, tribal structures are weaker, warlords tend to dominate and insurgents exploit tribal rivalries. In Iraq, the Sunni tribes were vital to success; in Afghanistan, tribal rivalries may undo the best-laid plans.

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Thailand

New face, old anger

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Thailand's new prime minister faces a near-impossible job

A POLARISED, exhausted democracy struggling through an economic slump turns to a young, photogenic and untested leader whose Democrat Party has been in opposition since 2001. Not President-elect Barack Obama, of course, but Abhisit Vejjajiva, a British-educated career politician aged 44, now Thailand's 27th prime minister. On December 15th parliament gave him the green light to form a new coalition government, the country's third in four months. He replaces the caretaker administration that had been in charge since December 2nd when the constitutional court dissolved three of the six parties in the previous coalition on corruption charges. Reasonably enough, Mr Abhisit has said that his first priority in office will be to restore economic confidence after months of chaos. Good luck to him.

For a start, Mr Abhisit lacks a popular mandate to lead his country. His victory in parliament, by a margin of 235 to 198, was achieved by luring away former government members of parliament, including stalwart followers of Thaksin Shinawatra, the ex-prime minister who was convicted in absentia of abusing power and now lives in exile. The defections were achieved with the financial carrots that are taken for granted in Thai coalition-building, plus the tap of a military stick. General Anupong Paochinda, the army chief, met senior politicians before the vote to offer his advice, meetings that seem to have put the kibosh on last-ditch efforts by Mr Thaksin's allies to form their own government.

Naturally, the generals deny any political meddling. And, indeed, Mr Abhisit's ascent to power is most obviously attributable to the antics of the People's Alliance for Democracy (PAD), the royalist group that last month took over Bangkok's airports in a bid to oust the government. After the constitutional court did just that, the PAD ended its six months of street protest which had verged, at times, on armed revolt. But PAD leaders have vowed to return to the streets, if necessary, to chase out any "evil people" in government. Mr Abhisit has wagged his finger at the group's bad behaviour, but is unlikely to bring it to heel. One of its leaders is a sitting MP in his party.

The Thaksin camp has its own rowdies, known as the red shirts (PAD supporters wear royalist yellow). Hundreds of red shirts picketed parliament on December 15th to vent their fury at Mr Abhisit's selection. Two days earlier more than 40,000 people filled a stadium in Bangkok to hear a taped message of encouragement from Mr Thaksin himself.

Keeping a lid on all this political anger would challenge any leader. The prime minister's first test will be the by-elections on January 11th to replace 29 disqualified MPs. The Puea Thai (the new name of a party led by Thaksin loyalists) will try to chip away at his improbable coalition. Mr Abhisit is a smooth talker but does he have the stomach for so turbulent a ride?

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China and Taiwan

Ever cuddlier

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From The Economist print edition

Man and mail can now travel directly between Taiwan and China

Reuters



Happiness is a step across the Strait

WHEN China offered 30 years ago to set up transport links with Taiwan, the island's government said no. But as China's economy grew, Taiwan wavered. On December 15th ships, aircraft and mail at last began routine daily crossings directly across the Taiwan Strait. A jubilant Chinese official declared it "the final part of our economic circle with Taiwan."

Taiwan's president, Ma Ying-jeou, was no less upbeat. Since he was sworn in this May, Mr Ma has moved swiftly to mend fences. In July the two sides established weekend charter flights, albeit time-consumingly routed through Hong Kong's air space. Now weekday services have been added and the Hong Kong detour has been abandoned. Direct cargo flights have also been launched (60 a month initially). And mail is no longer exchanged circuitously, usually via Hong Kong.

For many of the hundreds of thousands of Taiwanese businesspeople and their relatives living and working in China, these services will be a boon. Changing planes in Hong Kong, as many weekday travellers previously had to, often meant the better part of a working day was used up on the journey.

Mr Ma hopes the easier connections with China will help Taiwan's recession-hit economy. The main opposition party, the Democratic Progressive Party (DPP), remains sceptical, saying the links threaten the island's security. But the DPP is still reeling from its losses in this year's parliamentary and presidential elections. And on December 12th its former leader, Chen Shui-bian (who was Taiwan's president from 2000 until Mr Ma took over), was charged in connection with corruption scandals affecting himself and his family.

In spite of the complexities of cross-strait transport, China has emerged in recent years as Taiwan's largest trading partner and Taiwan as one of China's biggest investors. But—to Mr Ma's disquiet—barriers remain, not least to Chinese investment in Taiwan and Taiwanese financial services in China. These issues will be discussed in Shanghai on December 20th and 21st at a cross-strait economic forum attended by the chairman of Taiwan's ruling Kuomintang party, Wu Poh-hsiung. Mr Wu will be the first of his rank to attend such a meeting.

The recent improvement of cross-strait ties will become all the more evident later in the month when two pandas are due to be flown (directly) from China to Taiwan as a goodwill gift. China offered the pandas in 2005 but Mr Chen spurned them (their names, Tuantuan and Yuanyuan, playing on a Chinese word for reunion, did not help endear them). Mr Ma prefers a cuddlier approach to the mainland.

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WORLD
ASIA

Australian tourism

Joy of the outback

Dec 18th 2008 | SYDNEY
From The Economist print edition

Can a film sell a country? Only if it's very good

"COME and Say G'day", a tourist campaign built round Paul Hogan, the star of "Crocodile Dundee", brought visitors swarming to Australia. Now, almost 25 years later, with the country's tourism business back in the doldrums, the authorities are hoping that another quirky outback movie will pull the same trick.

"Australia", which opened in its home market in November, is the most expensive Australian film ever made. It has some of the country's biggest cinema names: Baz Lurhmann as director; Nicole Kidman and Hugh Jackman as stars. But in America its early box-office takings were disappointing and its reviews have been pretty sad.

That has not stopped Tourism Australia, the government body that spins the country to potential visitors, from pouring A$50m ($33m) into a campaign linked to the film. Big hopes are riding on this. As a long-haul destination, Australia has been straining to build its visitor numbers in recent years: 5.6m visitors this year, unchanged from 2007.

One problem, according to Nick Baker, marketing manager of Tourism Australia, is that the country is suffering from a "lack of fashionability and buzz". A two-year campaign built round the slogan "So Where the Bloody Hell Are You?" only made things worse: some countries judged the campaign gauche, others a turn-off.

So Tourism Australia commissioned Mr Lurhmann to film two travel commercials, set in the same northern Australian outback locations as his film, and involving Brandon Walters, a young aboriginal actor who almost steals the movie's limelight. Tourism Australia hopes that the commercials, which will run in 22 countries until mid-2009, will help it meet its target of raising visitor numbers by 3.2% next year.

Though the campaign is designed to promote Australia, it also gives a nod to the movie itself. The point, Mr Baker explains, is that the commercials draw on the film's main theme: a toffy English aristocrat goes to Australia to sell an inherited property, only to get swept up in adventure, romance and a new life.

The "G'Day" commercials were a hit partly because of their freshness: Mr Hogan was an unknown face; the outback story struck a chord. Visitor arrivals doubled over the campaign's first three years. Can this be repeated? The new film's lukewarm reception, let alone the current economic climate, make it a tall order.

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Correction: Eid in Pakistan

Dec 18th 2008
From The Economist print edition

In an article last week on Pakistan's North-West Frontier Province, we shamefully muddled our Eids. Eid al-Adha marks the end of the Haj; Eid al-Fitr the end of Ramadan. We wrote that the Eid this month was the Ramadan one. Of course it wasn't. Sorry. This error has been corrected online.

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Somalia's Islamists

The rise of the Shabab

Dec 18th 2008 | KIUNGA
From The Economist print edition

Islamist fighters are taking over swathes of Africa's most utterly failed state

Reuters



FOR all its paradisal waters, golden dunes and swanky "eco-lodges", life in Kenya's coastal district of Kiunga, just a few miles from the border with Somalia, is hard. The place is remote, hungry and thirsty. The harvest and the wells have failed again. Fishermen have no boats, only frayed nets cast from shore. Their catch rots for want of refrigeration. But what makes the village elders more nervous than anything is their proximity to Somalia.

During a war in the 1960s between Kenya and Somali bandits, known as "shifta", who were egged on by Somalia, Kiunga was evacuated. These days a rough track, impassable during the rains, barely connects the two countries. The border has been closed since December 2006, when jihadist fighters in Somalia retreated headlong from Mogadishu, the capital, and Kismayo, a southern port, into the mangrove swamps around Ras Kamboni, just inside Somalia. There they were shredded by Ethiopian artillery and American air raids.

An attack on Kenya by Somali jihadists based near the border is unlikely. Resurgent fighters still train there but look north. They belong to the Shabab (Youth), the armed wing of the former Islamic Courts Union that was all but wiped out two years ago. The presence of hated Ethiopian troops in Somalia, together with a corrupt and hapless transitional Somali government, gave the Shabab a chance to regroup.

Money and arms from Eritrea, which wants to use Somalia to hurt Ethiopia, as well as from some Arab countries, enabled it to recruit. Several thousand have signed up in the past year. They attend large training camps in southern Somalia where one of the instructors is said to be a white American mujahideen. They are expected to disavow music, videos, cigarettes and *qat*, the leaf Somali men chew most afternoons to get mildly high. Thus resolved, they wrap their faces in scarves and seek to fight the infidel. In return, they get $100 a month, are fed, and can expect medical treatment and payments if they are wounded, as well as burial costs and cash for their families if they are killed.

The Shabab now controls much of south Somalia and chunks of Mogadishu. It took Kismayo a few months ago. The port of Marka, which takes in food aid, fell more recently. Many fighters are loosely grouped around two older jihadist commanders with strongholds near Kenya's border, Mukhtar Robow and Hassan Turki.

Mr Robow celebrated the recent festival of Eid al-Adha by hosting prayers in Mogadishu's cattle market. How sweet it would be at Eid, he told the gathering, if instead of slaughtering an animal in praise of Allah, they would slaughter an Ethiopian. On a visit to Marka he was only slightly less belligerent. He urged reconciliation—except with enemies of Islam. There are many of those, it seems. Hundreds of Somali aid workers, human-rights campaigners and journalists have been killed or exiled. Foreigners have been shot and kidnapped, in two cases just across Somalia's border, in Kenya and Ethiopia. Where it cannot exert control, the Shabab excuses banditry. Borrowing tactics from Afghanistan's Taliban, it spreads chaos to build a new order.

The Shabab has learnt from its mistakes in 2006, when it was overwhelmed in a few days by the Ethiopian army. It is now more pragmatic and more aggressive. This time round, it is apparently not picking fights with wealthy *qat* merchants. Men can chew what they like—but won't be "clean enough" to get a lucrative job in Kismayo's port. Education is encouraged. Girls can go to school. Charcoal burning is forbidden for the sake of the environment.

But the Shabab has also tightened its own security. Alleged spies for the transitional government or for Ethiopia are routinely beheaded with blunt knives. Mr Turki, the jihadist leader who lives mostly in the bush near the Kenyan border, sleeps in different houses when he is in a town. Public floggings and executions strike fear. So do masked faces. "Before, we knew who killed our relatives," says a Kismayo merchant. "Now we don't even know that."



Most tellingly, the Shabab has learnt how to get hold of money faster. It concentrates its fighters in towns where there is money to be earned. The aim is to create an army that puts Islamist identity above divisive clan loyalties. Shabab commanders say a pious state will emerge once weaker militias have been disarmed. Some reckon that the Shabab shares some of the ransoms earned by pirates who operate out of the central Somali port of Haradheere. Those in Puntland, farther north, are apparently beyond the Shabab's reach.

Ethiopia says it will withdraw its troops within weeks, once ships evacuate the 3,000 Ugandan and Burundian peacekeepers under the African Union's aegis holed up in Mogadishu. Somalia's transitional government looks even feebler than before. This week the president, Abdullahi Yusuf, an ageing warlord, sacked his prime minister, Nur Hussein, blaming him for what the president called a corrupt, inept and traitorous government. Mr Hussein refused to resign, and won a vote of confidence in parliament. Mr Yusuf went ahead and appointed his own prime minister anyway. More factional fighting beckons.

The UN says Somalia is the world's worst humanitarian emergency. Some 3.2m people are said to need aid. The UN, which says 40,000 Somali children could soon starve to death, expects fighting over food to break out, another reason the Shabab wants to control the ports. Pirates make it hard to deliver aid. Their activities may be curtailed after the UN Security Council this week let foreign governments chase pirates in Somalia itself as well as at sea. But the piracy will probably continue as long as the catastrophe on land does.

George Bush's administration backed some of Mogadishu's worst warlords as part of its war on terror. President Obama will have to take a new tack. The AU force has proved ineffective but a bigger or more

robust intervention, by America or any other country, is not expected; this week Condoleezza Rice, America's secretary of state, called in vain for UN peacekeepers to be sent. A new American administration is unlikely to urge negotiation any time soon with the Shabab; it is still listed as a terrorist group by the Americans and may indeed shelter al-Qaeda people. It may have sleeper agents in Kenya and even in Britain. It has certainly become stronger.

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Uganda

Catch him if you can

Dec 18th 2008 | NAIROBI
From The Economist print edition

African governments are co-operating in an effort to beat Uganda's rebels

JUST before mist shrouded the Garamba jungle in north-eastern Congo in the morning of December 14th, Ugandan fighter aircraft attacked five bush camps of the Lord's Resistance Army (LRA), a guerrilla group that has terrorised northern Uganda for 21 years. The Ugandan government says that the main camp belonging to the LRA's commander, Joseph Kony, was "thoroughly thumped". Helicopter gunships followed, strafing at low altitude. After that, a ground offensive began, with the aim of catching or killing Mr Kony.

The Ugandans, some of them veterans of peacekeeping in Somalia, fought alongside troops from the armies of Congo and south Sudan. This military co-operation is unprecedented. The Ugandans say they were well received by the Congolese at their barracks, though Congo blames Uganda for a number of atrocities during a five-year Congolese war, which ended in 2003. The two countries have also been at odds over an oil find in Lake Albert, which lies between them.

South Sudan's involvement was more expected, because the United States, south Sudan's patron, has long urged three-way action—by the Ugandans, the Congolese and the south Sudanese—against the LRA. The south Sudanese government in Juba, which had mediated tortuous talks between Uganda and the LRA for two years, had recently been angered by LRA attacks inside its own semi-autonomous region. Congo is fed up with the LRA for raping and kidnapping its civilians, many of them children.

Mr Kony's fate is unclear. He has a demonic hold over his fighters but can expect no sympathy from elsewhere. He is wanted for war crimes by the International Criminal Court at The Hague. Though this may have persuaded him to negotiate with the Ugandan government in the first place, it also made later peace talks trickier. In any case, negotiations now look dead.

The LRA may be defeated militarily. But Mr Kony has evaded death many times before. Moreover, the LRA's strength and ferocity were bolstered by genuine grievances among northern Uganda's Acholi people which have yet to be addressed. Uganda's president, Yoweri Museveni, promised direct talks with Mr Kony last week, even as he signed off on military action to kill him.

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Geothermal power in Africa

Continental Rift

Dec 18th 2008 | NAIROBI
From The Economist print edition

A hot new proposal for ending electricity shortages



SINCE 1904, when Prince Piero Conti managed to get a light bulb to flicker in an Italian lava field, geothermal power has depended on volcanic heat. The earth's crust needs to be thin, with high temperatures just below the surface. Cold water is pumped down a deep borehole and returns superheated to spin a turbine. To power its tiny and now spluttering economy, Iceland has already made use of what scientists call volcanism. Fiery bits of the Philippines also run on geothermal power.

So what about Africa? The continent's lack of electricity is a big deterrent to foreign investors, as demand for power grows by 8% a year. Some experts think the Rift Valley, which stretches from the northern end of the Red Sea down to Mozambique, is ideal for generating geothermal power.

This has many advantages. Geothermal power runs whatever the weather, making it ideal for providing the base power station of a national grid. It emits negligible carbon compared with fossil-fuel stations. Best of all, it offers indigenous power cheaply: east Africa sorely lacks west Africa's oil or the potential for solar power in the Sahel, Africa's wide belt just south of the Sahara desert. The United Nations Environment Programme, which has its world headquarters in Kenya's capital, Nairobi, thinks the geothermal potential of the Rift Valley is 14,000MW, yet only 200MW is currently captured. Aficionados of geothermal power say it could provide 10-25% of the region's energy by 2030.

But the technology has snags. It would create few jobs, a fact that turns off many African politicians, who tend to like national projects to be labour-intensive. It disrupts pastoralists herding their cattle and can leak radon and other gases. Its start-up costs are as high as drilling for oil, and may be higher than for coal power stations. So the World Bank has set up a geothermal fund to underwrite exploration in east Africa. If the Kyoto treaty on carbon emissions is rewritten, Africa may get cheap loans and know-how to help install more geothermal power stations.

Some 18 geothermal sites in the Ethiopian part of the Rift Valley and in the Danakil depression on the

border with Eritrea and Djibouti have been identified. The Ethiopians hope for 440MW of geothermal power against their present energy capacity of 790MW. Geothermal could be an alternative to hydroelectric dams, which provide most of the region's power but are vulnerable to drought. Djibouti has signed a deal with Iceland to build a geothermal plant near the Dantean furnace of Lake Assal, the continent's lowest point. The project will also capture steam for use as water in the parched country.

Kenya is Africa's geothermal pioneer. Its Olkaria station outside Naivasha already produces 158MW. The government says it wants to raise its geothermal capacity to 576MW within a decade. That could make a big difference. Kenya already uses up all its 1,200MW capacity and is compensating for frequent power cuts by installing temporary diesel generators.

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Egypt and Gaza

Can nothing be done?

Dec 18th 2008 | CAIRO
From The Economist print edition

Egypt's government takes the heat as the Gazans' lot gets even worse

Illustration by Peter Schrank



THE president of Egypt, Hosni Mubarak, is coming under growing criticism, abroad and at home, for failing to ease the plight of Gaza's 1.5m people, whose misery is increasing as Israel's siege of the tiny coastal strip grinds on. The blockade has enjoyed the quiet backing of America and its allies as well as Egypt's practical co-operation in closing Gaza's only border not directly controlled by Israel.

The blockade was meant to force Hamas, the Palestinian Islamist group that conquered Gaza in mid-2007 after winning a general election in the Palestinian territories the year before, to renounce violence, recognise Israel, and accept previous peace deals with Israel made by the Palestinian Liberation Organisation and the Palestinian Authority; the PA, dominated by the secular-minded Fatah group, is accepted by most countries as the Palestinian government. So far, however, after 18 months, the squeeze has hurt ordinary Gazans far more than it has harmed Hamas. The Israelis say they will open the crossings to people and goods (apart from a trickle of humanitarian supplies) only when Palestinian fighters stop firing rockets into Israel. A shaky truce between Hamas and Israel comes to an end on December 19th. It is unclear what will happen if a cycle of violence resumes on a larger scale.

While Israel receives growing international opprobrium, the PA, presided over from the West Bank by Fatah's Mahmoud Abbas, has seen its flimsy legitimacy eroded by charges of colluding with the Israeli oppressors. A chorus of opinion within the region, fanned by Hamas's ideological ally, Iran, and spread by like-minded Islamists elsewhere, is beginning to embarrass other pro-Western Arab regimes that have tacitly acquiesced in isolating Hamas.

This month in Tehran, Iran's capital, government-orchestrated crowds of students hurled Molotov cocktails at the offices of Saudi Arabian Airlines, attacked Egypt's diplomatic mission and called for Mr Mubarak's execution as a traitor. A leading Tehran daily, *Kayhan*, meanwhile, blasted him for "subservience to the Zionists" and accused King Abdullah of Saudi Arabia of being "indifferent to the massacre of Gaza's Muslims." A Friday sermon broadcast on Iran's state television advised Palestinians to copy the methods of Hizbullah, the Lebanese Shia party-cum-militia that fought a war with Israel in 2006.

This week Hassan Nasrallah, Hizbullah's leader, who is popular across the region, called for global protests against the blockade. At a rally in Amman, the Jordanian capital, the head of the national branch

of the Muslim Brotherhood, the regional movement of which Hamas is an offshoot, declared it "shameful" that Gaza is under siege and that Arab governments should connive in it. In Egypt, where police have arrested dozens of campaigners for trying to send convoys of food and medicine to Gaza, internet organisers have called for a general strike in support of the strip. Backed by mosque sermons fulminating against the siege, parliamentarians from the Muslim Brotherhood, Egypt's largest opposition party, are pressing Mr Mubarak's government to explain its policies. The government-appointed Sheikh of al-Azhar, Egypt's top cleric, branded the blockade a "sin against fellow Muslims".

To date, Egypt's government has escaped broad public censure for the restrictions it imposes on the border with Gaza. Last winter, when Hamas breached it, prompting thousands of Palestinians to surge into Egypt on a shopping spree, Egyptian officials countered with an information campaign to stoke nationalist resentment, warning people against an intrusion of Palestinian smugglers, counterfeiters and terrorists. The Egyptians scored points again earlier this month, when Hamas blocked the exit of Gazans headed for the annual pilgrimage to Mecca, on the ground that the Saudis had granted visas only to those who had applied through the PA and not through Hamas. Egyptian diplomats, meanwhile, have sought to rally official Arab support for their view that Hamas's rule in Gaza is illegitimate, even while they have been sponsoring talks to heal the rift between Fatah and its Islamist rivals.

Egypt and its Arab allies have their reasons for keeping Gaza isolated. Their policy began under American pressure soon after Hamas won a Palestinian general election in 2006. Egypt has kept the border closed partly to please America, which props up Mr Mubarak with aid, partly because his government loathes Hamas as a branch of its own Muslim Brotherhood, and partly in the hope of forcing Hamas to cede legitimacy to the PA, thereby keeping prospects for Palestinian unity and future peace dealings with Israel alive. Moreover, fearing that Israel's long-term goal is to dump Gaza and its troubles into Egypt's lap, the Egyptians insist that Israel must remain fully responsible for the territory.

So Egypt bristles at the criticism from fellow Arabs and Muslims. Ahmed Abul Gheit, its foreign minister, withdrew the country's top diplomat in Iran, accusing the Islamic Republic of trying to impose its ideology on the region: "They provide nothing for the Palestinian cause, save hollow speeches and false allegations."

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France and the European Union

Supersarko leaves the podium

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From The Economist print edition

Even as he vacates the European Union presidency, the French president contemplates a comeback

Reuters



AFTER six months of high drama and showmanship, the French will hand the rotating European Union presidency over to the Czechs on January 1st. Often, even fellow Europeans scarcely notice who is at the helm. But few can have missed the chairmanship of France's hyperactive president, Nicolas Sarkozy. After a presidency mainly preoccupied with the Russia-Georgia war and global economic meltdown, what has Mr Sarkozy's energetic, abrasive, impulsive brand of diplomacy really amounted to?

In terms of their set-piece ambitions, the French achieved much of what they aimed for. In July Mr Sarkozy launched a Union for the Mediterranean, bringing together leaders of 43 countries from the EU and the sea's rim. It now has a base (Barcelona) and a co-presidency (France and Egypt); its five deputy secretary-generals include an Israeli and a Palestinian.

At the recent EU summit in Brussels, Mr Sarkozy also persuaded his colleagues in record time to accept binding rules to reduce carbon emissions by 20% by 2020 (see article). On France's watch, the 27 EU members signed up to an "immigration pact". Britain and France, the EU's two biggest military powers, even made modest progress on common European defence: a British-led anti-piracy force off Somalia, the EU's first joint naval operation, is now cited as an example of the sort of ad hoc military arrangement that the EU should be able to put together at short notice.

The mood in the Elysée is quietly triumphant. "Europe has an image of being soft, slow and divided; now it has proved itself to be united, efficient and reactive," declares a senior presidential aide. Mr Sarkozy thrives on adversity and is bored by tranquillity. With his customary mix of bullying and charm, he has rolled up his sleeves to tackle problems. His shuttle diplomacy during the Russia-Georgia war and the financial crisis was not without fault, and the results were often less impressive than the diplomatic hoopla. But he did help to give Europe a single voice.

All this is a far cry from the divisions inside the EU over the Iraq war in 2003, when no leader could pretend to speak for the club and Jacques Chirac, Mr Sarkozy's predecessor, called for Europe to be a counterweight to American power. French voters approve of the new approach: in one poll, 56% judge Mr Sarkozy's EU presidency to have been a success. In a paper for the Robert Schumann Foundation, Jean-Dominique Giuliani, the think-tank's president, described the French presidency's crisis management as "brilliant". One EU diplomat calls Mr Sarkozy's chairmanship "outstanding". Martin Schulz, the leader of

the Socialist group at the European Parliament, has accepted that "the French presidency has been a success." Even an editorial in *Le Monde*, a leftist daily, has applauded Mr Sarkozy.

Yet behind all this self-congratulation lurk more sobering considerations. For all his dynamism, Mr Sarkozy has imposed himself as a globe-trotting dealmaker partly because of the absence of American leadership. The French EU presidency coincided with the dying months of the Bush administration. When Mr Sarkozy rushed to Moscow and Tbilisi in August, for example, the Americans stayed at home. In responding to financial troubles, he has already had to share the limelight with Britain's Gordon Brown. Come January 20th, when Barack Obama is inaugurated, Mr Sarkozy will be in for a rude shock as the world's attention turns to a new charismatic leader.

Second, Mr Sarkozy's mercurial leadership style makes him an erratic partner. In his eagerness to broker headline-grabbing deals, he tramples over the sensitivities of other countries, especially smaller ones (see article). He offended the Germans by excluding them from his original plan for the Mediterranean Union. It took months of patient diplomacy to win them round. Yet despite his often strained ties with Chancellor Angela Merkel, Mr Sarkozy seems to find it hard to resist taunting her. Last month, amid frustration over Germany's reluctance to do more to stimulate its economy, Mr Sarkozy said in front of her that "France is working on it; Germany is thinking about it."

Or consider his dealings with China and Russia. During his 2007 election campaign, Mr Sarkozy promised to be tough on both. Yet French business chiefs are now distressed that he has fallen out with the Chinese, who cancelled a planned EU-China summit. His cosiness with Dmitry Medvedev, the Russian president, has also taken him off in a strange direction. The Americans were taken aback when Mr Sarkozy declared that their planned anti-missile shield, to be deployed in the Czech Republic and Poland, would "bring nothing to European security". Mr Sarkozy is now pushing an idea backed by Moscow to hold a summit next year with the Russians to rethink Europe's "economic and security architecture", a proposal seen by many EU countries as a Russian ploy to weaken NATO in Europe.

Some are even wondering if Mr Sarkozy has ditched his Atlanticism and discovered his inner Gaullism, returning to a traditional French indulgence of Russia and outspoken hostility towards America. It cannot help that, according to insiders, Mr Sarkozy was especially cross that Mr Obama did not meet him when he was in America for a G20 gathering last month.

In some ways, Mr Sarkozy is a prisoner of his own impulsiveness, as well as of his tendency to over-personalise diplomatic relations. He has bottomless faith in his ability to persuade others. Hence his efforts, however naive, to accommodate Russia. Mr Sarkozy seems to think that he has an avuncular influence over Mr Medvedev, ten years his junior, and that he can build a grown-up relationship on this.

Yet the best bet is that Mr Sarkozy's underlying instincts remain broadly pro-American. He has sent extra troops to join NATO's force in Afghanistan. Next April he plans to return France to NATO's integrated military command, when he co-hosts the alliance's 60th anniversary meeting. This is one platform that he will exploit to prolong his international prominence.

Indeed, it is hard to see Mr Sarkozy taking a back seat after he hands the EU presidency to the Czechs. Despite German hostility, he has not given up hopes of presiding over meetings of countries in the euro, which conveniently excludes the Czechs. He also has his Club Med forum. And in any case, he is unlikely to be deterred by diplomatic niceties. After a speech to the European Parliament this week, he stated that he would naturally "be taking initiatives" next year. Mr Sarkozy may be about to see the last of the EU presidency; but the EU has by no means seen the last of Mr Sarkozy.

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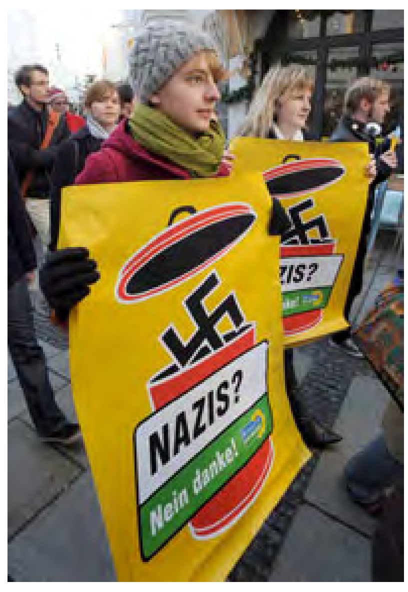
German neo-Nazis

A stabbing pain

Dec 18th 2008 | BERLIN
From The Economist print edition

An attack on a police chief revives fears of the far right

EPA



Where to put neo-Nazi rubbish

ALOIS MANNICHL, police chief of Passau, in Bavaria, pursues neo-Nazis to great lengths. A group recently buried a leader in a coffin draped with the swastika. Mr Mannichl had it dug up. On December 13th they took their revenge. Crying "you will not trample the graves of our comrades any more, you leftist pig," somebody stabbed and almost killed Mr Mannichl at the door of his house in Fürstenzell, near Passau. This brazen attack on a senior policeman brings a "completely new dimension" to violence by right-wing extremists, declared Bavaria's interior minister, Joachim Herrmann.

Germany's far right is a variegated but worrying fringe that pursues its xenophobic aims through electoral politics and sometimes murderous violence, fuelled by self-glorifying demonstrations and "hatecore" music. It is stronger in the east than in the west. The National Democratic Party of Germany (NPD) has seats in two east German state legislatures (another far right party has deputies in Brandenburg) and does well in local elections. It won 5% of the vote in Saxony's local election in June, getting 25% in one town. The far right got 2.5% of the vote in Bavaria's election in September.

The Bundesamt für Verfassungsschutz, Germany's domestic intelligence agency, reckons that some 31,000 people belong to 180 far-right organisations around the country. But many more are thought to share some of their attitudes. A fifth of Germans—and nearly 40% of Bavarians—dislike foreigners, down from a quarter two years ago.

Far-right violence in Bavaria is mostly low-level thuggery by young skinheads. They and others were responsible for 82 violent crimes in 2007, nearly twice as many as in 2006; but the rate subsided in the first half of 2008. The police have so far been spared. Now some wonder if the far right may produce its version of the Baader-Meinhof gang, which conducted a reign of terror against prominent Germans in the 1970s. This seems far-fetched. But the stabbing of Mr Mannichl has renewed calls for the banning of the NPD, which has ties to a number of even less savoury groups.

Thanks largely to Mr Mannichl, the neo-Nazi scene in Passau, a town of 50,000 at the confluence of the Danube and two other rivers, is a weedy affair. There are no cells in Passau itself, says Karl Synek, a Green member of the town council. Two or three meet in the neighbourhood in the few bars and cafés whose owners tolerate them, including a café in Fürstenzell. But Passau is a "white spot" on the map where far-right groups are trying to gain a foothold with help from allies on the other side of the border with Austria, says Mr Synek. With luck, a recovered Mr Mannichl will soon return to Passau's defences.

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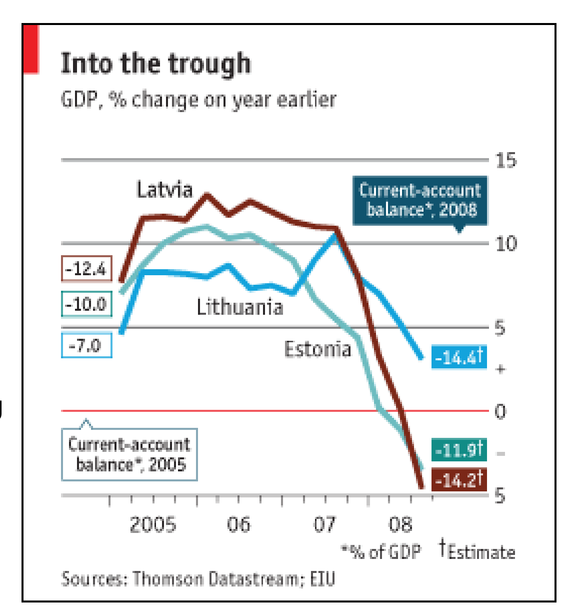
Latvia's troubled economy

Baltic brink

Dec 18th 2008
From The Economist print edition

Latvia has chosen economic torture over complete collapse

ONE of the more dramatic and controversial financial rescues in modern European history has been taking shape in Latvia over the past three weeks, led by officials from the International Monetary Fund and backed by neighbouring countries, the European Union and other institutions. Latvia's central bank has burned through €1 billion ($1.4 billion), around a fifth of its reserves, since mid-October to defend the national currency, the lat. This is pegged to the euro in an arrangement similar to a currency board, but with an even bigger lump of foreign currency to back local money in circulation. As a stopgap measure, the Swedish and Danish central banks this week offered a combined €500m in short-term swap facilities, allowing the central bank to keep exchanging lats for euros. The IMF-led bail-out—so far agreed only in outline—is likely to amount to over €7 billion, with contributions from the Fund, Nordic countries and Latvia's Baltic neighbour, Estonia.



The deal does not require Latvia to devalue its currency. This is highly controversial inside the IMF, where memories of the debacle over Argentina's abandonment of its currency board in 2002 are still painful. But ending the currency peg would be tricky, not least because the central bank's independence is constitutionally entrenched. It would bring little lasting benefit. And it would be deeply unpopular. Some 85% of loans to Latvian households and firms are denominated in euros and other foreign currencies.

The clinching argument was the damage that a devaluation could wreak elsewhere. Swedish and Finnish banks, which own the bulk of Latvia's banking system, could find their own creditworthiness suffering. Although total exposure to Latvia is still small, the perception of risk is damaging. In late October, the Swedish government launched a loan guarantee plan of SKr1.5 trillion ($190 billion) to allay fears about its banks' future.

A Latvian devaluation would also be likely to topple the currency boards of Estonia and Lithuania, and to endanger the precarious stability secured in recent weeks in other wobbly east European countries such as Hungary. The IMF said this week that it did not believe that either Estonia or Lithuania needed to abandon their currency boards. However, big current-account deficits there and in other east European countries remain a worry.

The bail-out plan makes unprecedented demands for fiscal adjustment to trim both the current-account deficit and inflation. After some years of double-digit growth (during which a complacent government signally failed to cool the economy), Latvia faces a 5% or greater contraction in GDP next year. The tax rises and spending cuts that have been agreed upon are worth a full 7% of GDP. Public-sector salaries will fall by 15%. Private employers are making deep wage cuts too.

Latvia's flexible economy may fare better than the political system, which is notable for fragmented parties, squabbling mediocrities, dodgy business lobbies and abuse of power (the security police briefly arrested an economics lecturer who urged people to keep their savings in foreign currency in cash). The prime minister, Ivars Godmanis, is a heavyweight, but lacks a competent team. This matters as the plan calls for big structural changes, including thorough reform of the financial system. The crisis was precipitated by the near-failure of a locally owned bank, Parex, which enjoyed a lively offshore business taking deposits from Russians, some of which appear to have been lent, unwisely, to locals. Having pushed the central bank into printing 200m lats ($390m) to support Parex, the government is now nationalising it.

Assuming that the bilateral elements in the plan are finalised, it may yet be agreed upon at an IMF board meeting shortly before Christmas. Any delay risks creating new room for speculators to try to attack the currency, and for locals to panic and turn more lats into euros (after some unwise remarks by the finance minister about a possible devaluation, the central bank lost more than €100m in reserves in a single day). Negotiating the plan has involved hectic late-night sessions in which outside officials have given locals copious instructions on the details of reform measures and the lobbying needed to gain support for them. It seems to have worked. But only for now.

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Italy and the Mafia

Sicilian vespers

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A wave of arrests hits the Italian Mafia

Reuters



Lo Presti under arrest

HE WAS found dead, hanging by his belt in Palermo's Pagliarelli jail. The apparent suicide of a 52-year-old Sicilian, Gaetano Lo Presti, on December 16th put a grisly end to what investigators claimed was a drive by the Sicilian Mafia to give itself a new leadership. Mr Lo Presti was among 89 alleged mobsters detained in one of the biggest-ever police operations in Sicily. Around 1,200 semi-militarised *Carabinieri* were deployed in raids there and (as an indication of Cosa Nostra's long reach) in placid Tuscany. Only five of those wanted by the police eluded capture. "Cosa Nostra is in evident crisis," exulted Italy's chief anti-Mafia prosecutor, Piero Grasso. "It cannot manage to reorganise itself."

In 2006 police seized Bernardo Provenzano, who was thought to have succeeded Salvatore "Toto" Riina (also known as "Shorty") as supreme head of the loose federation that is the Mafia. Two months later, they captured several of Mr Provenzano's alleged lieutenants. Last year they arrested his suspected heir-apparent, Salvatore Lo Piccolo.

The aim of this week's Operation Perseus was to abort a bid by Cosa Nostra's most senior mobsters at large to agree upon a new leader and to reconstitute its governing board. This "provincial commission" is not known to have existed since 1993, when Mr Riina disappeared into a high-security jail. The *Carabinieri* learnt of the plan when they eavesdropped on mob meetings, culminating in a summit last month attended by 31 leading *Mafiosi*. Other meetings were held in a garage, a dilapidated house and—yes—a barber's shop. The idea, said one boss, was that "if we have to do something, we all take responsibility." For what? Mr Grasso noted that the role of the provincial commission was to decide on big operations like the war the Mafia waged on the state with bombings and assassinations in the early 1990s.

Several other questions remain unanswered. One is whether Mr Riina was ever truly replaced as Cosa Nostra's boss of bosses; the overheard mobsters appeared to view him as the ultimate authority still. Another is why Mr Lo Presti died. Could he not face the prison regime that awaits Mafia bosses? Or did he fear something else? According to leaks from the investigation, Mr Lo Presti led a faction at odds with the strategy endorsed from jail by the 78-year-old Mr Riina, whose other nickname is "The Beast".

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Charlemagne

The magnificence of Nicolas Sarkozy

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France tries a novel approach: anticipating the Lisbon treaty

Illustration by Peter Schrank



PONDERING a moment of futile British courage—the charge of the Light Brigade at Balaklava, during the Crimean war—a French general, Pierre Bosquet, concluded that "it is magnificent, but it is not war." The phrase comes to mind again judging France's rotating presidency of the European Union under the leadership of Nicolas Sarkozy. In its thundering pace and reckless disregard for the rules, Mr Sarkozy's chairmanship was also magnificent. But it was not a normal EU presidency, at least as other countries conceive of such things.

At the end of the Brussels summit on December 11th and 12th, Mr Sarkozy declared that the meeting would "go down in European history". In ways he found "fantastic", he had shaken up the EU's habits, tripling the usual number of summits, and pushing his peers towards "less talk and much more action". The word immodest does not do justice to Mr Sarkozy on such occasions. He does not so much brag about his achievements as offer a running commentary about the wonder of being himself. Being in charge of Europe had been "fascinating, fulfilling and rather easy," he commented at one point.

Politicians are always calling things historic. Usually all that this means is "something that happened while I was in office". But this time Mr Sarkozy is right to use the word. His six months were supposed to be dominated by routine Euro-business such as finalising a deal on climate-change measures and a French-tinged campaign to build a "more protective Europe". Instead, as is so often the way, Mr Sarkozy found himself managing the EU through some grave crises.

He took office days after a referendum in Ireland in which voters had rejected the Lisbon treaty, a set of changes to the EU's institutional rule book. Then came the August war between Russia and Georgia. Above all, there was the global economic meltdown. The nature of these events rendered moot the usual Eurosceptic question: is joint EU action really necessary? It was—and, more crucially, it was needed fast.

Skilful French prodding forced the pace on concrete plans to parcel out the costs of slashing European greenhouse-gas emissions. It was March 2007 when EU leaders first agreed to cut emissions by a fifth by 2020, and to generate 20% of energy from renewable sources. As EU economies slumped, fears grew that leaders might drag their feet on a final deal. Italy and Germany fretted that heavy industry might flee to less restrictive parts of the world, while the east Europeans worried about the costs of it all. Yet after some financial sweeteners for the noisiest, EU leaders did a deal at the summit rather than be left behind by a newly green-tinged American administration.

Rotating EU presidencies are not meant to push national agendas, but to consult and identify the consensus view. That is the theory. For good or ill, Mr Sarkozy has little time for it. He repeatedly startled France's traditional ally, Germany, with unexpected proposals. He forged a hasty (and flawed) peace deal in Georgia without a formal mandate—sidelining the EU's foreign policy chief, Javier Solana. At an EU-Russia summit, he went far beyond his remit by criticising the notion of American missile defences in Poland and the Czech Republic.

The French presidency also tried to bounce other countries into such Gallic dreams as "European sovereign-wealth funds" to protect companies from takeover. France repeatedly pushed for governments in the euro area to have more say over things like exchange rates. And in off-the-record briefings, Mr Sarkozy and his close aides belittled the European Commission, suggesting that it should leave the business of taking political initiatives to national governments (with a special role for an inner core of countries, built around the 15-strong euro group, plus Britain).

A power grab by the big

In a sense Mr Sarkozy acted as if the Lisbon treaty were already in force—or rather, the bits of it that he likes. These include rules allowing small groups to push ahead with deeper integration and, above all, an article that gives a leading role to a new full-time president of the European Council to represent national governments. A strong Europe must be built on "strong nations", Mr Sarkozy said on December 16th, summing up his stint as boss of all Europe. Big countries do not have more "rights" than the small, he added soothingly, but they do have more "responsibilities".

Even though it boosts big countries, federalists love Lisbon because it also offers more majority voting, which they think will reduce the ability of dissenters to block new policies. Where it suited them, the French acted as if majority voting were already in force, notes an EU diplomat. Yet in other dossiers, like climate change, Mr Sarkozy sought unanimous agreement, even though he did not have to. "Imagine the weakness" of a climate change deal imposed on an unhappy minority, he said (rightly).

Supporters of the Lisbon treaty insist that its institutional changes will give the EU new strength to cope with a tricky new world. Mr Sarkozy insists he wants the new treaty, which he has got the Irish to promise to vote on again. But arguably, the historic significance of the French presidency has little to do with Lisbon. Instead, it offered a glimpse of how Europe may work in a world in which the rules of global governance are in flux. Mr Sarkozy relied on variable geometry, as he assembled EU leaders in groups of four, 16 and 27, and then took six of them to Washington for the G20 financial summit.

Amid all this manoeuvring, France often angered small countries, which felt pushed around. A multi-speed Europe is a risky idea that could break up the EU. But Mr Sarkozy was surely right that future global co-operation will take different, ad hoc forms. It is "untrue" that institutions stop Europe from taking decisions, he said. Europe's problem is a lack of political will. Like Bosquet's in 1854, Mr Sarkozy's judgment was both harsh and correct.

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Correction: Russian oil

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In our special report on Russia (November 29th), we said that "Rosneft sells the bulk of its oil through Dutch-registered trading firm, Gunvor." In fact Rosneft sells only an estimated 30-40% of its oil through Gunvor. Other aspects of the article are the subject of a legal complaint by Gennady Timchenko and Gunvor.

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Sinking sterling

Fall from grace

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The pound's plunge is hurting, but pain is part of the remedy

Illustration by David Simonds



AFTER a decade in which it rode high on the foreign exchanges, sterling has been plumbing new depths. Predictably, this has rekindled the acrimonious debate over whether Britain should join the euro. In fact, the pound's recent weakness has reinforced the economic case for staying out.

Since its latest peak in July 2007, sterling's trade-weighted value has sunk by a quarter. The fall, which exceeds the depreciation after Britain was turfed out of the European exchange-rate mechanism in 1992, has passed through three main stages (see chart). First the pound weakened against the euro in late 2007 and early 2008. Then this summer it started a steep drop against the dollar. In November sterling's decline against the euro resumed, falling below €1.10 on December 17th.



The pound's slide has aroused understandable anxiety. Currencies are national virility symbols and sterling is sagging. Britain's postwar history was punctuated by currency crises, which devalued governments as well as the pound.

Sterling looks especially vulnerable in the harsh new world that dawned after the credit crisis. One worry is that the public finances are in a mess, which might undermine confidence among foreign investors who hold a third of all gilts. Another is that Britain, with its big financial-services sector, is Iceland writ large.

There is something in both concerns, but not much. The Treasury's recent forecasts for the budget deficit, due to rise next year to 8% of GDP, were dismal. Yet Britain's public debt compares favourably with that of other large economies; indeed, its gross government debt as a share of GDP is the lowest among the G7 countries. Although there are worries about underlying obligations that are not counted, such as unfunded public-service pensions, these do not enjoy the same degree of formal government backing as gilts.

As for the notion that Britain is a bigger Iceland, whose currency crashed along with its banks, this misses

several points. For one thing, size matters. Iceland has a population of 300,000 compared with Britain’s 60m; its national output and fiscal resources are commensurately smaller. More important, Iceland’s banking liabilities in mid-2008 were almost ten times the size of its GDP, according to the OECD. Britain’s were 4.7 times output, somewhat higher than in the euro area (3.5) but lower than in Switzerland (6.8).

Britain’s highish ratio reflects the City’s longstanding role as an international financial centre. The foreign banks that cluster there account for over half of all banking liabilities in Britain and two-thirds of those in foreign currencies. By contrast, Iceland’s own banks accounted for all its banking liabilities, and most of these were in foreign currency. Britain is far less exposed to a run on its banks by foreign depositors than Iceland was, says Ben Broadbent, an economist at Goldman Sachs.

The fall in the pound may have been disconcertingly large but it marks an overdue adjustment after a long period in which sterling was overpriced. A measure of the sustainable value of a currency is the exchange rate that would equalise the prices of goods and services in two countries. According to the OECD, sterling’s purchasing-power parities against the dollar and the euro are $1.50 and around €1.30 respectively. This suggests that the pound is now close to its underlying value against the dollar and about 15% below its long-term value against the euro.

Sterling’s slide has been greeted with dismay by British tourists, accustomed to the heft a strong pound gave their wallets when holidaying abroad. But their pain is part of the remedy for Britain’s economic ailments. A weaker pound will encourage more of them to holiday at home, and will attract more foreign tourists to Britain.

The pound’s fall is similarly benefiting British exporters. As long as their overseas markets are also suffering from the global downturn, the pound’s fall is not enough to make up for weakening foreign demand. But it does make the exports they can sell more profitable and encourages them to build up their presence abroad.

Advocates of British membership of the euro found it difficult to make their case while sterling was thriving. Now the pound is being pounded they are finding a readier audience. Yet monetary sovereignty is all the more crucial when the economy is in trouble. The Bank of England has been able to cut interest rates below those in the euro area for the first time since the single currency started in 1999. That in turn has pushed sterling down, a stimulus all the more welcome since monetary policy is less effective than usual because banks are reluctant to lend. The need for such a boost was underlined this week by figures showing that the number of people claiming unemployment benefit increased by 75,700 between October and November, taking the total above 1m.

The weaker pound will help not just to soften the blow of recession but also to create a basis for a subsequent recovery that will be necessarily less reliant on consumers. The inflationary impact of sterling’s slide will be countered by the collapse in commodity prices and the contraction in economic activity. In a letter published on December 16th, Mervyn King, governor of the Bank of England, said that consumer-price inflation, currently 4.1%, was likely to be below its 2% target during much of 2009.

Sterling is now in the stocks. But that is the way with currencies; the euro, now the strongman, was once dubbed a “toilet currency”. The economic case for Britain to keep the pound remains a strong one.

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Upgrading railways

The new age of the train

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A big engineering project highlights the contradictions of Britain's railways

IT WAS one of the shortest-lived revolutions ever. On December 14th Network Rail, the firm that maintains Britain's railway tracks, trumpeted its "massive" achievement in at last completing the decade-long upgrade of the West Coast Main Line, an arterial railway that connects London to Glasgow by way of Birmingham and Manchester. The shining new tracks would enable Britain's private rail firms to run over 1,000 extra journeys a week and shave up to 30% off journey times between some of the country's biggest cities. A full hour would be cut from the five-and-a-half hour trip from London to Glasgow.

Sadly, the scenes that greeted curious commuters the very next day were dishearteningly familiar. A blown fuse in north London delayed trains for over an hour. The night before, travellers on another line had been stranded for six hours, thanks to broken power cables.

Britain's trains rank alongside its weather as a standing national joke, but that hasn't stopped people flocking to them over the past decade. Passenger kilometres travelled by rail, likely to total around 50 billion in 2008, are the highest in history. The network has shrunk by roughly a third since its postwar heyday, but more trains now trundle up and down the country than ever before. Even punctuality—which fell after the Hatfield rail crash in 2000, when speed restrictions were introduced across much of the network—is improving, and 88% of trains arrive more or less on time. One of the biggest problems on the modern network is overcrowding and congestion, something that the improved west-coast line should help to ease, at least for a few years.

Although the upgrade was prompted by rail's popularity, its progress reveals some underlying problems too. When the work began in 1998, it was expected to cost around £2 billion (some $3 billion, at the exchange rate of the day) and to be ready in 2005. Problems with a planned high-tech signalling system and the collapse of Railtrack, Network Rail's predecessor, caused costs to balloon to £9 billion. Similar cost inflation has plagued the network as a whole. The Department for Transport spent £4.4 billion last year subsidising private railways, a number roughly four times larger than the subsidy paid to British Rail, the state-owned firm that ran the railway until it was privatised in the mid-1990s.

Alarmed by the cost, ministers have decided that passengers must bear more of the burden. Total subsidies are forecast to fall to £3.3 billion by 2009-10, and to keep falling thereafter. To fill the gap, fares will continue to rise by more than inflation (a 7% increase is scheduled in January).

That will provoke howls of protest, and reinforce the impression (which surveys by Passenger Focus, a travellers' watchdog, show are widespread) that railways are a rip-off for those who use them. But it is far from clear that trains deserve the state support they get. Rail journeys account for just 6% of total travel (roads for 84%), but subsidising rail consumes around 20% of the government's £21 billion transport budget. Using an average price for road-building over the past decade, the £9 billion spent on the west-coast railway line could have added an extra lane to around 450 miles of motorway—roughly the length of the M1, M3 and M4 combined.

Admittedly, cost-effectiveness is not the only consideration. Rail travel is usually cleaner, greener and faster than travel by car. And it is hard to see roads offering an alternative means of shuttling millions of commuters in and out of built-up large cities, a niche that trains dominate.

As for apportioning the cost of rail, David Leeder, vice-chairman of the Commission for Integrated Transport, a state-funded think-tank, points out that businessmen and commuters are exactly the sort of people who can most easily afford to pay higher fares. "Currently, we have rich people from the south demanding that poorer people in the north subsidise a service that, by and large, they don't use," he says. "I'm not sure that makes a lot of sense".

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University applications

Getting in

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Strategic thinking for the aspiring student

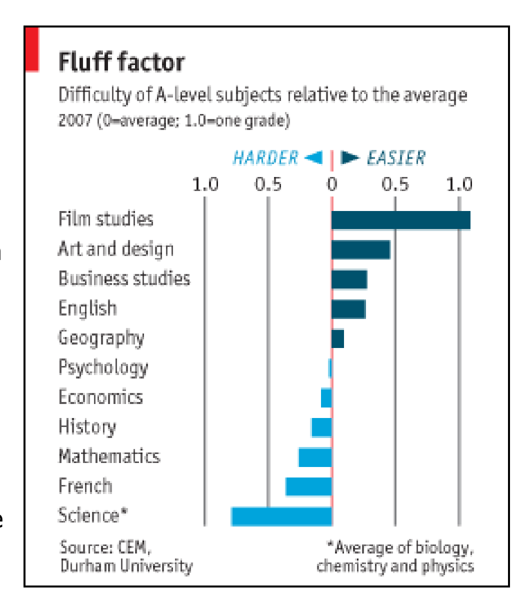
FOR the 300,000 or so British youngsters putting the finishing touches to university-application forms over the Christmas holidays, it is decision time. Which institutions to choose? Which of the myriad alluringly (and sometimes improbably) titled degree courses? Weighty decisions, no doubt, but evidence is mounting that the more crucial choices were made two years earlier, when students picked which three or four subjects they would continue to study until leaving school.

According to research published earlier this month, many may have chosen the wrong ones, and damaged their chances of getting into a highly regarded university. Policy Exchange, a centre-right think-tank, looked at the A-levels offered by successful applicants to a group of 27 very selective universities—some ancient, some modern—and concluded that, despite the fact that all subjects are notionally equal, in reality admissions tutors think more of some than of others.

A tenth of all A-levels are in art and design, or drama, film and media studies—but only a twentieth of those taken by students who gained places at top universities. They were also less likely than the average A-level candidate to have studied psychology or sociology, and more likely to have studied maths or a science. The think-tank concluded that although only two universities, Cambridge and the London School of Economics (LSE), openly list the A-levels they are less keen on, others have similar, unstated, biases. They should come clean, it said, in order to avoid penalising students whose schools (or parents) are not wise to the unwritten distinction between "hard" and "soft" A-levels.

Admissions tutors told the researchers that they were dubious about certain subjects not because they were too easy but because they were a poor preparation for their institution's courses. Research-intensive universities offer more science and language degrees, and fewer in media studies and the like. So one possibility is that the distinctive profile of the students admitted to elite universities is simply a matter of students picking the right universities for the subjects they are interested in.

Running counter to this reassuring interpretation is a recent analysis of A-level results by researchers at Durham University. They compared the relative difficulty of every subject, and found that no matter which method they used, some subjects really did turn out to be harder than others—so much so that a candidate could expect a result two grades higher in the easiest subject than in the hardest (see chart). The widespread perception that sciences are particularly difficult turned out to be correct—and the order in which subjects were ranked matched closely the perceived preferences of selective universities. Applicants with a clutch of A grades in sociology and similar subjects may be bright; those with As in physics and French are pretty sure to be. That means an admissions tutor can be more confident that the latter are able students, says Robert Coe, the lead author of the study.



All this leaves tutors in a quandary. Coming clean about which A-levels they think best prove students' abilities risks provoking politicians: "We simply do not recognise the label 'soft' or 'hard' A-levels," says Jim Knight, the schools minister; and the frankness of Cambridge and the LSE over the subjects they look down on made them no friends in high places. But secrecy is not fair, as students are misled into choosing supposedly nonexistent soft subjects—and are then at a loss to understand why they missed out on coveted university places, despite their high grades.

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Civil partnerships

Happy anniversary

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Three years on, civil partnerships are going strong—especially among men

VALENTINE'S Day is a couple of months off, but this weekend many couples will be out celebrating. On December 21st it will be three years since civil partnerships—gay marriages in all but name—were introduced in England and Wales (Scots and Northern Irish registrars began one and two days earlier respectively). The pent-up eagerness of many couples to tie the knot created an early rush: nearly 4,000 people got hitched that December. Candlelit restaurants will be doing brisk business in the next few days.

By halfway through this year nearly 60,000 Britons had entered a same-sex union, giving them legal rights virtually identical to those of married couples. In contrast to their American counterparts, most British gays seem relaxed about not having the right to call their partnership a marriage. "It meant we could get the law through sooner. Changing the wording is not really a priority," says a spokesman for Stonewall, a gay-rights lobby group. And speed is not everything: Denmark was the first country to recognise gay partnerships, in 1989, but still does not let them adopt children.

Gay couples getting hitched are older than straight ones: men are 43 on average and women 41, compared with 36 and 34 among straight couples (including those remarrying). And it seems that gay men, though often characterised as promiscuous, are settling down in greater numbers than lesbians. Men have out-partnered women in every quarter since civil partnerships were introduced; in London last year nearly 75% of those contracted were between men. Some unions have already broken down; but so far male partnerships have proved less likely than female ones to end in dissolution.

One explanation offered for this bias is that lesbian identity has been shaped by an anti-marriage strand of feminism. But that seems to fall down elsewhere: in Vermont, for example, the first American state to offer comprehensive civil unions, about two-thirds of partnerships are between women. It may simply be that Britain has more gay men than lesbians. The census does not pry that far, but the Office for National Statistics announced on December 4th that it would begin quizzing people about their sexuality next year in six of its regular surveys. Estimates broken down by age and region will be available in 2010.

It will be interesting to see if they tally with the government's current guess that between 5% and 7% of the population is lesbian, gay or bisexual. Data on civil partnerships suggest that the last category might prove the most surprising: of those who have formed partnerships so far, a tenth of men and nearly a quarter of women were married before to someone of the opposite sex.

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Bagehot

Black-sky thinking

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In 2009 David Cameron needs to start smiling again

Illustration by Steve O'Brien



"IF THOU entertainest my love," a phoney letter of adoration enjoins Malvolio in "Twelfth Night", "let it appear in thy smiling. Thy smiles become thee well; therefore in my presence still smile…" In the nice production now in the West End, the morose steward (played by Derek Jacobi) twists and contorts his features into an unwonted grin. It is a comic vignette—a man struggling to overcome his gloom—that encapsulates what may be the main challenge and the key question of British politics in 2009.

The question is not about Gordon Brown. Rather, it concerns David Cameron, the leader of the Conservatives. Is Mr Cameron really such a good leader of the Tory party as he once seemed? The related challenge is: can Mr Cameron manage to smile?

A few months ago, before the bizarre political drama of the autumn, doubting Mr Cameron's talent would have seemed odd. Mr Cameron faced a prime minister so reviled that his own Labour Party was plotting to unseat him. Then Mr Brown's incantations about ending "boom and bust" were violently debunked: banks were nationalised, the housing market crashed, the chancellor of the exchequer, Alistair Darling, unveiled petrifying debt projections and thousands of people lost their jobs.

Mr Cameron's three predecessors as Tory leader could scarcely dream of such a slam-dunk opportunity, or of the pliable support within the party that he enjoys. In America, similar circumstances predictably led to punishment of the incumbent Republicans. Yet in Britain the Tories' advantage in the opinion polls has been eroded, almost to nothing. Mr Brown and Mr Darling handsomely lead Mr Cameron and George Osborne, the shadow chancellor, on the salient issue of economic competence.

Wow—and how? Mr Brown's own political skill, dormant for much of his premiership, is a big part of the story. With epic *chutzpah*, he has eschewed all responsibility for the recession. He brought Peter Mandelson back into government, a manoeuvre that neutered his internal rivals and intimidated his external ones. And he saw the chance for redemption that the financial crisis offered—a strategic opportunity for welcome state activism that only a party of the left could seize (even if, in Labour's case, doing so involved junking many of its economic shibboleths).

But another part of the explanation has been Mr Cameron's own awkward response to the crisis. In the initial banking havoc, he was patriotically supportive of Mr Brown. Then, nauseated by the prime

minister’s grandstanding, he switched to virulent aggression, yelping that the crisis was even worse than Labour admitted. The Tories opposed the government’s VAT reduction and broader fiscal stimulus; desperate to insert himself into the news, Mr Cameron has made some counter-proposals of his own, calling for a loan-guarantee scheme for businesses and, this week, for a “day of reckoning” for nefarious financiers.

Some of these ideas—the business-loan scheme, for instance—are good. But the Tories’ problem is not specific policies or a lack of them: it is not actual policies that have boosted Mr Brown. His bounce, and Mr Cameron’s slide, are a function of mood.

Look at Mr Cameron’s current image. Labour’s caricature of his astringent economic approach as “do nothing” is unfair but evocative; it has awakened an almost olfactory memory of Tory responses to past downturns. Meanwhile, Mr Cameron pursues his theme of the “broken society”, his catch-all, exaggerated label for a range of ills such as drug abuse and chaotic families. The “broken society” slogan was invented in a recent but distant era when, so Mr Cameron breezily argued, the economy was essentially sound. Combined with his glumly parsimonious economic message, this social pessimism now makes him seem unappealingly bitter and recriminatory. He has begun to resemble those much-derided, Tebbitean predecessors, only with better hair.

This is almost the opposite pitch to the one that made Mr Cameron popular. A year ago he was peddling “hope” and “aspiration”; now those alluring abstract nouns have been replaced by “efficiency”, “reductions” and, lurking behind those, “cuts”. Where once his message was cunningly multi-valanced—Mr Cameron had a knack for discussing subjects such as immigration in a way that seemed liberal and conservative at the same time—now it is depressingly bald. Blue-sky thinking has been replaced by black-sky thinking. Once it was Mr Brown who, with his puritanical strictures on casinos, drugs and booze, was the Malvolio-esque killjoy of British politics. Now Mr Brown is studiously upbeat, and Mr Cameron is the chief doom-monger.

That is not to say that he should revert to the exotic photo opportunities and cuddly rebranding of yore, blithely overlooking the mounting job losses. To prosper, however, he needs to revive the optimism that used to characterise his rhetoric, updating it for the post-credit-crunch era. He needs new tactics—a superior plan to revive manufacturing, say—but also the old, neglected strategy: to promise (eventually and with caveats) a better, happier Britain. Even in a slump, he needs to start smiling again.

Grace under pressure

In truth, Bagehot’s question about Mr Cameron’s leadership was somewhat facetious. After all, in 2008 the Tories won famous victories in London and Crewe, and are still narrowly ahead in the opinion polls (though they are well short of the numbers they need to win a majority in the House of Commons at a general election). When the election comes—and for all the chatter about an early vote, the Tories are unlikely to need the manifesto they are somewhat despondently preparing in the next few months—Mr Cameron may be a decisive asset. He is calm under pressure (no tantrum, Cameron) and an impressive campaigner.

But he will flop in 2009 unless he wrenches himself out of the downbeat posture into which events and Mr Brown have driven him. Unlike Malvolio, his smile genuinely becomes him—and for Mr Cameron, smiling really is the way to achieve greatness.

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Climate change diplomacy

Fiddling with words as the world melts

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Global consensus on cooling the planet looks maddeningly elusive—but individual states and regional blocks may be stepping into the breach

EPA



IMAGINE that some huge rocky projectile, big enough to destroy most forms of life, was hurtling towards the earth, and it seemed that deep international co-operation offered the only hope of deflecting the lethal object. Presumably, the nations of the world would set aside all jealousies and ideological hangups, knowing that failure to act together meant doom for all.

At least in theory, most of the world's governments now accept that climate change, if left unchecked, could become the equivalent of a deadly asteroid. But to judge by the latest, tortuous moves in climate-change diplomacy—at a two-week gathering in western Poland, which ended on December 13th—there is little sign of any mind-concentrating effect.

To be fair to the 10,000-odd people (diplomats, UN bureaucrats, NGO types) who assembled in Poznan, a semicolon was removed. At a similar meeting in Bali a year earlier, governments had vowed to consider ways of cutting emissions from "deforestation and forest degradation in developing countries; and the role of conservation [and forest management]". After much haggling, delegates in Poland decided to upgrade conservation by replacing the offending punctuation mark with a comma.

At this pace, it seems hard to believe that a global deal on emissions targets (reconciling new emitters with older ones) can be reached next December at a meeting in Copenhagen, seen as a make-or-break time for UN efforts to cool the world.

In the background of the Poznan meeting, there was mild optimism (and a reluctance by others to put fresh cards on the table) ahead of an expected change of stance by an Obama administration in America; resentment (among the poor and green) over the refusal of Japan and Canada to promise deeper cuts; and strong demands from China for the transfer of technology from the rich to others. In the final hours of the conference, the governments of small, sinking island nations were delighted to learn that they, and not some global body, would control a fund to help them adapt to a warming world. Their mood changed when it became known that no extra money had been set aside for this purpose.

However hard it looks to put this global jigsaw together, there were some encouraging unilateral moves, especially from Latin America. Mexico vowed to halve greenhouse emissions by 2050; Brazil said it could reverse a recent rise in deforestation and cut the rate of forest loss by 70% over the next decade; Peru said that with help it could reduce deforestation to zero.

The Brazilian plan rests in part on using satellites, laws and police to combat illegal loggers and ranchers. Guyana's president, Bharrat Jagdeo, made a different argument as he presented a plan for a low-carbon

economy designed to suit the interests of all countries at an early stage of developing their natural resources.

Even on the (optimistic) assumption that the police try their best, efforts to stop deforestation may fail unless it becomes more profitable for people who control the forest to leave trees intact than it is to cut them down. Moreover, Mr Jagdeo and his advisers insist, any plan to compensate countries for keeping trees must avoid the trap of rewarding past malefactors while penalising the virtuous. The case is not a moral one—it's merely that rewarding ex-sinners alone could displace deforestation to pristine places like Guyana.

Compensation plans must therefore be based not on past sins, but on current economic pressures (like high palm oil prices). In practical terms, the owners of Guyana's forest need to get at least the $580m a year which they could earn from exploiting it for logs and agriculture: from the world's point of view, a cheap way to conserve carbon and other desirables like biodiversity.

Whether Mr Jagdeo's vision ever materialises depends not just on the UN's deliberations over punctuation, but also on the willingness of powerful players like the European Union to abide by emissions goals that keep the price of carbon high.

At a summit on December 11th and 12th, the EU's leaders eventually decided to keep their targets intact while also allowing opt-outs which may yet undermine their stated goals. President Nicolas Sarkozy, who chaired the summit, boasted of a "terrific fight" which French diplomacy had managed to finesse. Despite many concessions for heavy industry and poor newcomers to the EU, the final deal (perhaps to its credit) left everybody unhappy. European industry felt too much was being asked of it, while green groups thought industry had gained rather too many concessions.

Twenty-twenty vision

In the background of the EU's wrangling were some goals laid out last year in pre-recession times. By the year 2020, the EU promised three things: to cut overall greenhouse gas emissions by 20% over 1990 levels; to obtain 20% of overall EU energy from renewables like wind, waves and plant waste; and to make efficiency savings of 20% over forecast consumption.

The new EU deal kept the targets, but offered sops to countries that fear an emphasis on the "polluter pays" principle may drive up electricity costs, or push heavy industry away to places, like Asia, that in Copenhagen will oppose big emission cuts. Opt-outs were granted from plans to force large polluters to buy allowances to emit carbon at auction. Poorish ex-communist countries that rely on coal for power will be allowed to dish out up to 70% of the carbon allowances needed by power firms, for no payment, for a few years after 2013.

Heavy industries that face global competition will also get up to 100% of their allowances free, at least initially, if they use the cleanest available technologies. And EU nations will be allowed to buy in credits for emissions reductions far from Europe, and count them against as much as 90% of their national reduction targets.

Eurocrats say a reduced emphasis on auctioning permits won't undermine the benefits of the package; carbon-cutting discipline still comes from the ceiling on the number of allowances issued. That cap will be cut each year after 2013: this should help to support carbon prices in the EU's Emissions-Trading Scheme.

The concessions risk prolonging some follies. For example, big power firms that now get carbon allowances free have been passing on their nominal cost to customers. Handing out free allowances may also reduce revenues available to governments for investment in greenery. Moreover, some pro-market countries fret that using climate-change policies to redistribute money within the EU will cause trouble in global talks. It will make it harder to resist China and India when they seek transfers of money in the name of "solidarity".

Faced with such diplomatic gamesmanship, some greens may now hope that an asteroid-type warning appears on the radar screen. It may already be in view. On December 16th, a scientist from America's National Snow and Ice Data Centre said the shrinking of Arctic ice (and exposure of extra sea to radiation) was warming the world at an accelerating pace.

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Global protest

Rioters of the world unite

Dec 18th 2008 | ATHENS AND NEW YORK
From The Economist print edition

They have nothing to lose but their web cameras

AP

EVERY scholar of 20th-century history can tell you about the Communist International—usually called Comintern, and strictly speaking the third in a series of four global fraternities whose aim was to pursue the class struggle all over the world.

Is it possible to imagine an Anarchist International, a trans-national version of the inchoate but impassioned demonstrations that have ravaged Greece this month? (Perhaps because it is easier to say what Greece's malcontents are against than what they are for, the word "anarchist" is an accepted catch-all term for the anti-establishment rebels who form the hard core of the Athenian protesters.)

By definition, anarchy is harder to propagate than rigid Leninism. Whatever is spreading from Athens, it is not a clear programme for a better world. The malcontents of Greece include ideological class warriors, nostalgists for the protests against the junta of 1967-74 and people (including drug dealers and bank robbers) with a grudge against the police. Relations between police and the counter-culture have worsened recently; the police are accused (rightly) of bullying migrants, the bohemians of dallying with terrorism. A messy scene, with no obvious message.

But the psychological impulse behind the Greek protests—a sense of rage against all authority, which came to a head after a 15-year-old boy was killed by a police bullet—can now be transmitted almost instantaneously, in ways that would make the Bolsheviks very jealous. These days, images (moving as well as still) spread faster than words; and images, of course, transcend language barriers.

E-communications are now a familiar feature in pro-democracy protests against dictators. Equally fast-moving, say specialists, is the role of technology in what might be called "undemocratic protests": violent acts in prosperous, networked societies.

This became obvious during the French riots of 2005, when teenagers posted blogs that urged people to "burn the cops"—and made massive use of text messages to co-ordinate the protests. The youths that trashed Budapest in 2006 relied on blogs to enlist supporters, and distribute an audio recording of the prime minister admitting government corruption.

Hungarian blogs were also used to aggregate visual evidence of police brutality. There were novel online projects such as an "Interactive Riot Walkthrough", which superimposed photos of the latest events on a map of Budapest, offering "virtual tours" of the city as it burned.

Already, the Greek riots are prompting talk of a new era of networked protest. The volume of online content they have inspired is remarkable. Photos and videos of the chaos, often shot with cellphones, were posted online almost in real time. Twitter, a service for exchanging short messages, has brimmed with live reports from the streets of Athens, most of them in Greek but a few in English.

A tribute to the slain teenager—a clip of photos with music from a popular rock band—appeared on YouTube, the video-sharing site, shortly after his death; more than 160,000 people have seen it. A similar tribute group on Facebook has attracted more than 130,000 members, generating thousands of messages and offering links to more than 1,900 related items: images of the protests, cartoons and leaflets.

A memorial was erected in Second Life, a popular virtual environment, giving its users a glimpse of real-life material from the riots. Many other online techniques—such as maps detailing police deployments and routes of the demonstrations—came of age in Athens. And as thousands of photos and videos hit non-Greek blogs and forums, small protests were triggered in many European cities, including Istanbul (see picture above) and Madrid. Some 32 people were arrested in Copenhagen.

The spread of sympathy protests over what began as a local Greek issue has big implications for the more formal anti-globalisation movement. That movement has ignored the idea of spontaneous but networked protest, and instead focused on taking large crowds to set-piece events like summits. Such methods look outdated now. Governments are not the only things that networked “anarchy” threatens.

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Angels

Messengers in the modern world

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Angels haven't gone away. If anything, the virtual world has given them a new lease of life

Banksy



WHEN he was eight years old, William Blake saw a flock of angels in a tree. Their bright wings "bespangled every bough like stars". He also watched them in a field on the outskirts of London, threading through the oblivious haymakers. Cecil Collins, an English artist working in the second half of the 20th century, painted angels as he saw them: inhabiting trees, blessing rivers, walking by the sea. In 1949 Jacques Prévert, a French surrealist poet, imagined a boxing match with an angel under magnesium lights. He ended up winded and defeated, blinded with feathers. Pia Northrup, a Danish poet, spots angels in her modern Danish kitchen ("An angel came in;/we fled from him/as though we had got too near the fire").

Poets and artists see strange things. But angels are notable for their trespassing into the modern world. Blake was not in some rural idyll; he was on Peckham Rye, within a mile or so of his dark Satanic mills, and down the road from the workhouse. Angels were no more expected or regarded in his day than in ours. He was lucky, in fact, to escape a whipping from his father for telling a lie. Collins worked in the midst of Thatcherite Britain, serene in his conviction that angels were "part of the transforming process of the universe". The mysterious artist Banksy, whose work is pictured above, portrays angels in flak-jackets and gives policemen wings. This particular angel rests, smokes and shines in a doorway in rundown Bermondsey, in south-east London.

A modern Irish writer, Lorna Byrne, is convinced that she sees angels; so convinced, that her memoir, "Angels in My Hair", has been bought for six figures by the American publishers of "The Da Vinci Code". She sees them as spirals of light behind people; their human form, she says, is just a disguise to make them less frightening. Their wings are not always obvious, but, as she told the incredulous man from the

Daily Telegraph, angels sometimes show off their golden feathers to her. They were in the room during the interview; her eyes were on them, not on him.

The inexorable progress of the Enlightenment, though it has sent devils packing and committed nymphs and sprites to the realms of silliness, has never managed to stamp out angels. They survive, and are taken seriously. Indeed, when John Cornwell, a Catholic writer, wanted to pen a counter-tract in 2008 to Richard Dawkins's atheistic book, "The God Delusion", he boldly put it in the mouth of Charles Darwin's guardian angel, as if there was no problem there. The book ended, cheekily: "With affection, from Darwin's Angel, and Yours."

Angels are notable for their trespassing into the modern world

Angels fascinate, as Christmas-card-makers rediscover every year. Agnostic buyers snap them up for their golden robes, their peacock wings, their haloes raying glittery light, their instruments that hum with the music of the spheres. Angels appear on earrings, thimbles and dinner plates, as flying pins and cherubs curled up asleep. Western commercial angels are soothing creatures: in a world of stress their wings are as soft as fresh towels or bubble bath, their expressions gentle, their activity nothing more strenuous than praying, singing, or lightly dancing. Every "Little Book of Calm" includes them, along with kittens and flowers.

The modern world's obsessions, or hang-ups, do not touch the angelic sphere. Most angels are safely sexless: though they are beautiful, they are beyond desire, and their lovely faces and androgynous bodies have no improper suggestions to make. Though they are uniformly young, white and Aryan, somehow they flit past the keepers of political correctness. And though they are still somewhat religious, they are not embarrassingly so. Where a Nativity won't do, and a robin on a pudding would be crass, angels fill the yawning space with beauty and taste.

Even as images on cards, or as ornaments hanging in a window, angels perform their age-old function as messengers and mediators between the seen and unseen, or material and spiritual, worlds. Many people still want go-betweens of this sort. Polls show that three-quarters of Americans believe in angels (more Republicans than Democrats, more southerners than north-easterners, but still an impressive showing). In Israel, 45% of people believe in them. In Britain, Canada and Australia the figures are in the 30s, still far healthier than churchgoing.

To some extent, a sort of folk belief sustains them. Those who die young in Britain—teenage victims of knife crime, child victims of road accidents—are immediately dubbed "angels", and are understood to have entered the ranks of the innocent and the immortal. Survivors of near-death experiences typically mention shining figures who, at the end of tunnels, greet and help them. Even when people do not much believe in the hereafter, they easily invoke or envisage heavenly beings to ease death and make some sense of life.

It may not be surprising, then, that the world's largest angel sculpture is only a decade old and stands, not in some cathedral, but at the head of the Team valley overlooking Gateshead, in the postindustrial north of England. The "Angel of the North" is built of 200 tonnes of steel, with rigid and rather rusty outstretched wings. For a while it was dressed in a Newcastle United shirt with "Shearer 11" on the back. But the shirt made the point. This is a local, protecting angel, whose function is to link the mining past with the future and to focus the hopes and fears of a region struggling out of decline.

For its tenth anniversary, Gateshead folk were asked who their own particular angel was. Besides the many who said "My Mam", there were more unexpected answers. A teenage boy volunteered "My guitar, because it's fun to play." And one man said, "The good in people, that's always there, in some little way." The angel realm is subtle and complex, and almost everyone still knows it.

Praisers and poster-boys

All the world's major religions have had vital dealings with angels, the relaters of divine words to them in their beginnings. It is centuries since the Angel Gabriel appeared to Mary at Nazareth or to Muhammad at Mecca, since an angel intervened to stop Abraham sacrificing Isaac, or since angels announced the rising of Christ from the dead. It is even some decades since the Angel Moroni, in dazzling white, helped Joseph Smith to unearth the golden tablets of the Church of Jesus Christ of the Latter-Day Saints from a hillside in Manchester, New York. But as religion has re-emerged, especially in more fundamental forms, angels have re-emerged also. And they demand attention. They are too bound in with the fundamental incidents and mythologies to be moved aside as fanciful. It all stands or falls with them.

The modern Catholic Catechism teaches that angels are a “truth of faith”, meaning roughly that if you believe in them they are true, and they are true because you believe. There’s no rational riposte to that. Maimonides, a Jewish philosopher of the Middle Ages, proposed a more functional view of angels as metaphors for the laws of nature: the burning of fire, the flowing of water, and so forth. But they have never managed to cling to these scientific credentials, or to tone down the religious ones. Each Catholic mass is still an act of praise in which worshippers explicitly join their voices with the angelic choirs. And the Second Coming, which every American evangelical anticipates, will feature angels in their millions, choreographed as planned from the beginning of the world.

The importance of angels to the Divine Enterprise makes them naturally hierarchical. At the top of the nine medieval orders, still invoked today, are those who stand closest to the throne of God: Seraphim, Cherubim and Thrones. Then come the outer ranks: Dominations, Virtues and Powers. The last three orders alone have regular dealings with mortals: Principalities, Archangels, Angels.

Mary Evans



Angelic string theory

Among these are the only angels who are given names, the archangels Michael, Gabriel, Raphael and Uriel (though Uriel’s name is doubtful). These are the poster-boys of the angel world, blond, muscled and shining. Michael, the fighter, slays the devil; Gabriel, the annunciator, droops beautifully with his spray of lilies; Raphael, the guardian, takes his small charge by the hand; and Uriel simply glows. For better particulars, it is hard to beat John Milton’s description of the “affable” Raphael, off to check on Eden in “Paradise Lost”:

At once on th’eastern cliff of Paradise
He lights, and to his proper shape returns
A Seraph wing’d; six wings he wore, to shade
His lineaments divine; the pair that clad
Each shoulder broad, came mantling o’er his breast
With regal ornament; the middle pair
Gird like a starry zone his waist, and round
Skirted his loins and thighs with downy gold
And colours dipped in Heav’n; the third his feet
Shadowed from either heel with feathered mail
Sky-tinctured grain. Like Maia’s son he stood
And shook his plumes, that Heav’nly fragrance filled
The circuit wide.

Helpers in Tennessee

Only Adam and Eve deserved a Raphael. Ever since that unhappy operation, the job of protecting human souls has been assigned to junior angels. St Jerome was the first to assert the presence of guardian angels protecting every soul—the sort angel-spotters most often see. But in the modern world, apart from that great outlier, Lucifer (the champion of liberty, expelled from the Organisation, with a bunch of other rebels, for pride and disobedience), most angels are presumed to have a guarding and messaging role. Their multiple jobs have been merged into general communications. In the Greek Orthodox church all angels wear ribbons in their hair, the better to hear God’s word and human cries, and act on them.

And they are good at it. The internet is crowded with testimonies of their efficacy and helpful intervention. Most, however—as Ms Byrne attests—seem to adopt human disguise when they appear on earth. When Josh’s van broke down in Tennessee, he was helped by a man and a woman dressed in white who were playing pinball in a diner. They said they installed aluminium sidings, and bought a bus ticket for him; but when he turned round to say goodbye, they had gone. Paul, a no-nonsense army officer, was saved from a gang of thugs in a parking lot by a man in jeans and a red shirt, who quietly walked him away while the thugs froze, and then faded into an alleyway.

Such encounters are not enough for some people. There are still anecdotes like Amy’s, who felt she was kissed by the archangel Michael while his white wings enfolded her bedroom and his “spectacular” blue eyes gazed into hers. But most active modern angels look like ordinary men and women: the man sitting in the café, the woman crossing the street, the teenager next in line at the bus stop. They are not in the

least otherworldly: they do jobs, and carry enough money to help a stranger out of trouble. Then they vanish.

Or they can be a simple voice in the head, like the one Tammy heard as she was driving along one night in thick fog. She thought it was safer to stay with the slow traffic; but then she heard a voice ("not out loud, but in my mind") telling her to get in the fast lane. She obeyed it, and narrowly avoided crashing into a stalled car in the lane she had left. According to a recent article by Jonah Lehrer in the *New Yorker*, scientists who have investigated insights like this have found bursts of electrical frequency in the brain, a sudden spike of gamma rhythm caused by the binding of neurones in the cortex. That sounds like a plausible explanation; but to Tammy and others like her, it might equally be an angel passing.

The knowledge universe is the ideal home of angels

Instant messaging

Oddly enough, modern science—so antithetical to angels—has made the world a more receptive place for them. In the age of the internet, scientific and technical language evokes angels all the time. Invisible networks and the world wide web are their natural and eternal business; from Ancient Greece onwards they have had instant access, global reach and universal applications. (Their very name, from the Hebrew, means "one going", continuous action.) As Aquinas put it in his "Summa Theologia", "The angel is now here, now there, with no time-interval between…angels exist anywhere their powers are applied." Indeed, as fast as bytes flash, angels will always go faster. It is sheer speed that makes them invisible.

Angels also "know all the time", as Aquinas puts it. No need for tortuous reasoning or extrapolation; they are "perfect instances of intelligence", divine intelligence unconfined and unmediated by bodies, ever active and actualised, with the whole moving globe apparent to their gaze. And as soon as they wish to make their thoughts known, those thoughts are known. No barriers of any sort impede the message in, or the message out.

The knowledge universe is therefore the ideal home of angels, and their natural place. Anyone who supposes that the potential of the human mind is scarcely yet tapped or appreciated, and that its operations may extend to levels far subtler and higher than the senses can grasp, is leaving space for an angelic realm. And where there are still gaps in the grand unified theory of the universe that scientists dream of, angels fill them, agents of motion and illumination otherwise unexplained.

No doubt, in the future, these agents will acquire some sub-sub atomic label; just as, presumably, whole classes of angels have been replaced by photons and quarks. In some mystical quarters, the vibrating strings that are now posited to make up the created universe are happily compared to angels' harps or the motion of their wings. And the web of unseen, unknown material that scientists call dark matter, holding everything together, might as well have been spun by the angels until the Large Hadron Collider proves otherwise.

Rex Features

But it is in the realm of consciousness, especially artistic feeling and expression, that angels still hold out most boldly against science. They travel, like consciousness, outside space and time; the laws of the physical universe put no limits on them. Their ceaseless web of connections includes insight, inspiration, persuasion, adoration, and the synthesising and creative power of the imagination: human capabilities that many poets see as divine, even if scientists don't. Wherever there is no explanation for genius, or perceived beauty, or sudden comfort, or for the way a line or phrase ignites the heart, angels provide one.

Wrestling and resisting

They are also held accountable for less comfortable feelings: inferiority, shame, terror, impossibility of achievement. There is nothing subtle about such angels; they are as strong as demons and, in their purity, more implacable and challenging. In the Old Testament, Jacob wrestled until dawn with an angel (in fact, described only as "a man", like those angels in the Tennessee diner)

who represented his own sins to him. The angel refused either to listen to him or to accept his repentance; on the other hand, he did not simply break away. He let Jacob test himself all night against him, and in the end blessed him. In the same way Rainer Maria Rilke, the greatest German poet of the 20th century, was tormented by angels all through his “Duino Elegies”:

Who, if I cried out, would hear me among the angels’
hierarchies? And even if one of them suddenly
pressed me against his heart, I would perish
in the embrace of his stronger existence.
For beauty is nothing but the beginning of terror
which we are barely able to endure and are awed
because it serenely disdains to annihilate us.
Each single angel is terrifying.



Watching over Gateshead

Rilke saw his particular angel as strong, still, radiant, a pure divider “between the Here and There”. But his angel also meant that “There” could be “Here”, within Rilke. This was the being he had to wrestle with in order to write poems. The angel not only brought inspiration to him, but also challenged him constantly to be better than he was. And it carried his own significance into the universe. “Shine, oh keep on shining!” he cried in “To the Angel” in 1913. “Make me known to the distant stars…”

This sense of vital two-way communication, still not wholly explained by the synapses of the brain, is the chief reason that angels keep intruding into the 21st century. Their very persistence is a sign of the potential, and the defiance, of human imagination. When Antony Gormley, the sculptor of the “Angel of the North”, was asked “Why an angel?” he replied: “Because no one has ever seen one, and we need to keep imagining them.” The first part may not be true; but the second is.

Among the imaginings is that ultimate and common dream, that humans may become angels themselves. Christian and Muslim mystics both believe it, as the natural progression of the spirit to a purer and higher state. But ordinary, not very religious people find themselves hoping for it too. Humans in angel guise, with haloes askew and briefcases still tightly clutched among the clouds, remain a favourite of cartoonists. Typically, the new arrivals are surprised and disconcerted by their heavenly state. But most surprising of all, to any experienced passing angel, would be the implication that from now on they will have nothing much to do.

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Human evolution

Why music?

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Biologists are addressing one of humanity's strangest attributes, its all-singing, all-dancing culture



"IF MUSIC be the food of love, play on, give me excess of it." And if not? Well, what exactly is it for? The production and consumption of music is a big part of the economy. The first use to which commercial recording, in the form of Edison's phonographs, was to bring music to the living rooms and picnic tables of those who could not afford to pay live musicians. Today, people are so surrounded by other people's music that they take it for granted, but as little as 100 years ago singsongs at home, the choir in the church and fiddlers in the pub were all that most people heard.

Other appetites, too, have been sated even to excess by modern business. Food far beyond the simple needs of stomachs, and sex (or at least images of it) far beyond the needs of reproduction, bombard the modern man and woman, and are eagerly consumed. But these excesses are built on obvious appetites. What appetite drives the proliferation of music to the point where the average American teenager spends 1½-2½ hours a day—an eighth of his waking life—listening to it?

Well, that fact—that he, or she, is a teenager—supports one hypothesis about the function of music. Around 40% of the lyrics of popular songs speak of romance, sexual relationships and sexual behaviour. The Shakespearean theory, that music is at least one of the foods of love, has a strong claim to be true. The more mellifluous the singer, the more dexterous the harpist, the more mates he attracts.

A second idea that is widely touted is that music binds groups of people together. The resulting solidarity, its supporters suggest, might have helped bands of early humans to thrive at the expense of those that were less musical.

Both of these ideas argue that musical ability evolved specifically—that it is, if you like, a virtual organ as precisely crafted to its purpose as the heart or the spleen. The third hypothesis, however, is that music is a cross between an accident and an invention. It is an accident because it is the consequence of abilities that evolved for other purposes. And it is an invention because, having thus come into existence, people have bent it to their will and made something they like from it.

She loves you

Shakespeare's famous quote was, of course, based on commonplace observation. Singing, done well, is certainly sexy. But is its sexiness the reason it exists? Charles Darwin thought so. Twelve years after he published "On the Origin of Species", which described the idea of natural selection, a second book hit the presses. "The Descent of Man and Selection in Relation to Sex" suggested that the need to find a mate being the pressing requirement that it is, a lot of the features of any given animal have come about not to aid its survival, but to aid its courtship. The most famous example is the tail of the peacock. But Darwin suggested human features, too, might be sexually selected in this way—and one of those he lit on was music.

In this case, unlike that of natural selection, Darwin's thinking did not set the world alight. But his ideas were revived recently by Geoffrey Miller, an evolutionary biologist who works at the University of New Mexico. Dr Miller starts with the observations that music is a human universal, that it is costly in terms of time and energy to produce, and that it is, at least in some sense, under genetic control. About 4% of the population has "amusia" of one sort or another, and at least some types of amusia are known to be heritable. Universality, costliness and genetic control all suggest that music has a clear function in survival or reproduction, and Dr Miller plumps for reproduction.

One reason for believing this is that musical productivity—at least among the recording artists who have exploited the phonograph and its successors over the past hundred years or so—seems to match the course of an individual's reproductive life. In particular, Dr Miller studied jazz musicians. He found that their output rises rapidly after puberty, reaches its peak during young-adulthood, and then declines with age and the demands of parenthood.

As is often the case with this sort of observation, it sounds unremarkable; obvious, even. But uniquely human activities associated with survival—cooking, say—do not show this pattern. People continue to cook at about the same rate from the moment that they have mastered the art until the moment they die or are too decrepit to continue. Moreover, the anecdotal evidence linking music to sexual success is strong. Dr Miller often cites the example of Jimi Hendrix, who had sex with hundreds of groupies during his brief life and, though he was legally unmarried, maintained two long-term liaisons. The words of Robert Plant, the lead singer of Led Zeppelin, are also pertinent: "I was always on my way to love. Always. Whatever road I took, the car was heading for one of the greatest sexual encounters I've ever had."

Another reason to believe the food-of-love hypothesis is that music fulfils the main criterion of a sexually selected feature: it is an honest signal of underlying fitness. Just as unfit peacocks cannot grow splendid tails, so unfit people cannot sing well, dance well (for singing and dancing go together, as it were, like a horse and carriage) or play music well. All of these activities require physical fitness and dexterity. Composing music requires creativity and mental agility. Put all of these things together and you have a desirable mate.

Anecdotal evidence linking music to sexual success is strong

Improve your singing…

A third reason to believe it is that music, or something very like it, has evolved in other species, and seems to be sexually selected in those species, too. Just as the parallel evolution of mouse-like forms in marsupial and placental mammals speaks of similar ways of life, so the parallel evolution of song in birds, whales and gibbons, as well as humans, speaks of a similar underlying function. And females of these animals can be fussy listeners. It is known from several species of birds, for example, that females prefer more complex songs from their suitors, putting males under pressure to evolve the neurological apparatus to create and sing them.

And yet, and yet. Though Dr Miller's arguments are convincing, they do not feel like the whole story. A man does not have to be gay to enjoy the music of an all-male orchestra, even if he particularly appreciates the soprano who comes on to sing the solos. A woman, meanwhile, can enjoy the soprano even while appreciating the orchestra on more than one level. Something else besides sex seems to be going on.

The second hypothesis for music's emergence is that it had a role not just in helping humans assess their mates, but also in binding bands of people together in the evolutionary past. Certainly, it sometimes plays that role today. It may be unfashionable in Britain to stand for the national anthem, but two minutes

watching the Last Night of the Proms, an annual music festival, on television will serve to dispel any doubts about the ability of certain sorts of music to instil collective purpose in a group of individuals. In this case the cost in time and energy is assumed to be repaid in some way by the advantages of being part of a successful group.

The problem with this hypothesis is that it relies on people not cheating and taking the benefits without paying the costs. One way out of that dilemma is to invoke a phenomenon known to biologists as group selection. Biologically, this is a radical idea. It requires the benefits of solidarity to be so great that groups lacking them are often extinguished en bloc. Though theoretically possible, this is likely to be rare in practice. However, some researchers have suggested that the invention of weapons such as spears and bows and arrows made intertribal warfare among early humans so lethal that group selection did take over. It has been invoked, for example, to explain the contradictory manifestations of morality displayed in battle: tenderness towards one's own side; ruthlessness towards the enemy. In this context the martial appeal of some sorts of music might make sense.



Robin Dunbar of Oxford University does not go quite that far, but unlike Dr Miller he thinks that the origins of music need to be sought in social benefits of group living rather than the sexual benefits of seduction. He does not deny that music has gone on to be sexually selected (indeed, one of his students, Konstantinos Kaskatis, has shown that Dr Miller's observation about jazz musicians also applies to 19th-century classical composers and contemporary pop singers). But he does not think it started that way.

…and your grooming

Much of Dr Dunbar's career has been devoted to trying to explain the development of sociality in primates. He believes that one of the things that binds groups of monkeys and apes together is grooming. On the face of it, grooming another animal is functional. It keeps the pelt clean and removes parasites. But it is an investment in someone else's well-being, not your own. Moreover, animals often seem to groom each other for far longer than is strictly necessary to keep their fur pristine. That time could, in principle, be used for something else. Social grooming, rather like sexual selection, is therefore a costly (and thus honest) signal. In this case though, that signal is of commitment to the group rather than reproductive prowess.

Dr Dunbar thinks language evolved to fill the role of grooming as human tribes grew too large for everyone to be able to groom everyone else. This is a controversial hypothesis, but it is certainly plausible. The evidence suggests, however, that the need for such "remote grooming" would arise when a group exceeds about 80 individuals, whereas human language really got going when group sizes had risen to around 140. His latest idea is that the gap was bridged by music, which may thus be seen as a precursor to language.

The costliness of music—and of the dancing associated with it—is not in doubt, so the idea has some merit. Moreover, the idea that language evolved from wordless singing is an old one. And, crucially, both singing and dancing tend to be group activities. That does not preclude their being sexual. Indeed, showing off to the opposite sex in groups is a strategy used by many animals (it is known as lekking). But it may also have the function of using up real physiological resources in a demonstration of group solidarity.

By side-stepping the genocidal explanations that underlie the classical theory of group selection, Dr Dunbar thinks he has come up with an explanation that accounts for music's socially binding qualities without stretching the limits of evolutionary theory. Whether it will pass the mathematical scrutiny which showed that classical group selection needs genocide remains to be seen. But if music is functional, it may be that sexual selection and social selection have actually given each other a helping hand.

Like cheesecake, music sates an appetite that nature cannot

The third hypothesis, though, is that music is not functional, and also that Dr Dunbar has got things backwards. Music did not lead to language, language led to music in what has turned out to be a glorious accident—what Stephen Jay Gould called a spandrel, by analogy with the functionless spaces between the arches of cathedrals that artists then fill with paintings. This is what Steven Pinker, a language theorist at Harvard, thinks. He once described music as auditory cheesecake and suggested that if it vanished from the species little else would change.

Dr Pinker's point is that, like real cheesecake, music sates an appetite that nature cannot. Human appetites for food evolved at a time when the sugar and fat which are the main ingredients of cheesecake were scarce. In the past, no one would ever have found enough of either of these energy-rich foods to become obese, so a strong desire to eat them evolved, together with little limit beyond a full stomach to stop people eating too much. So it is with music. A brain devoted to turning sound into meaning is tickled by an oversupply of tone, melody and rhythm. Singing is auditory masturbation to satisfy this craving. Playing musical instruments is auditory pornography. Both sate an appetite that is there beyond its strict biological need.

Of course, it is a little more complicated than that. People do not have to be taught to like cheesecake or sexy pictures (which, in a telling use of the language, are sometimes also referred to as "cheesecake"). They do, however, have to be taught music in a way that they do not have to be taught language.

Words and music

Aniruddh Patel, of the Neurosciences Institute in San Diego, compares music to writing, another widespread cultural phenomenon connected with language. True language—the spoken languages used by most people and the gestural languages used by the deaf—does not have to be taught in special classes. The whole of a baby's world is its classroom. It is true that parents make a special effort to talk to their children, but this is as instinctive as a young child's ability (lost in his early teens) to absorb the stuff and work out its rules without ever being told them explicitly.

Learning to write, by contrast, is a long-winded struggle that many fail to master even if given the opportunity. Dyslexia, in other words, is common. Moreover, reading and writing must actively be taught, usually by specialists, and evidence for a youthful critical period when this is easier than otherwise is lacking. Both, however, transform an individual's perception of the world, and for this reason Dr Patel refers to them as "transformative technologies".

In difficulty of learning, music lies somewhere in between speaking and writing. Most people have some musical ability, but it varies far more than their ability to speak. Dr Patel sees this as evidence to support his idea that music is not an adaptation in the way that language is, but is, instead, a transformative technology. However, that observation also supports the idea that sexual selection is involved, since the whole point is that not everyone will be equally able to perform, or even to learn how to do so.

Do they know it's Christmas?

What all of these hypotheses have in common is the ability of music to manipulate the emotions, and this is the most mysterious part of all. That some sounds lead to sadness and others to joy is the nub of all three hypotheses. The singing lover is not merely demonstrating his prowess; he also seeks to change his

beloved's emotions. Partly, that is done by the song's words, but pure melody can also tug at the heart-strings. The chords of martial music stir different sentiments. A recital of the Monteverdi Vespers or a Vivaldi concerto in St Mark's cathedral in Venice, the building that inspired Gould to think of the non-role of spandrels, generates emotion pure and simple, disconnected from human striving.

This is an area that is only beginning to be investigated. Among the pioneers are Patrik Juslin, of Uppsala University, and Daniel Vastfjall, of Gothenburg University, both in Sweden. They believe they have identified six ways that music affects emotion, from triggering reflexes in the brain stem to triggering visual images in the cerebral cortex.

Such a multiplicity of effects suggests music may be an emergent property of the brain, cobbled together from bits of pre-existing machinery and then, as it were, fine-tuned. So, ironically, everyone may be right—or, at least partly right. Dr Pinker may be right that music was originally an accident and Dr Patel may be right that it transforms people's perceptions of the world without necessarily being a proper biological phenomenon. But Dr Miller and Dr Dunbar may be right that even if it originally was an accident, it has subsequently been exploited by evolution and made functional.

Part of that accident may be the fact that many natural sounds evoke emotion for perfectly good reasons (fear at the howl of a wolf, pleasure at the sound of gently running water, irritation and mother-love at the crying of a child). Sexually selected features commonly rely on such pre-existing perceptual biases. It is probably no coincidence, for instance, that peacocks' tails have eyespots; animal brains are good at recognising eyes because eyes are found only on other animals. It is pure speculation, but music may be built on emotions originally evolved to respond to important natural sounds, but which have blossomed a hundred-fold.

The truth, of course, is that nobody yet knows why people respond to music. But, when the carol singers come calling, whether the emotion they induce is joy or pain, you may rest assured that science is trying to work out why.

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The Fastnet Lighthouse

Light on a lonely rock

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On Ireland's south-western tip, at the mouth of the Atlantic, stands a monument of man's gift to mankind

Alamy



IT WAS a hazy night in July 1904 and the steamer *Alexandra* ploughed slowly through the waters of West Cork, as an extraordinary experiment took place on deck. She was a rickety vessel, "as leaky as a sprat net" in the words of Sir Robert Ball, Ireland's most feted astronomer of the time. But he loved being aboard her. Almost every night her bespectacled old chef served him copious helpings of boiled lobster. After supper, he could climb on deck and relish two of his night-time passions: study of the gentle stars and, as scientific adviser to the Commissioners of Irish Lights, study of the illumination from lighthouses built around Ireland's treacherous coastline.

On this night, there were no stars visible; a light drizzle fell. But with the help of a mirror that he manoeuvred expertly, he measured the intensity of a new light from a lighthouse that he had never seen before. At 19 miles (30km) distance, the flashes were "splendid". At 22 miles, the glow still spread over the surface of the sea. As the *Alexandra* turned back to port, Sir Robert was spellbound by the brilliant whiteness of the light he was watching. "I cannot describe them otherwise than by saying they were magnificent. At ten miles, the great revolving spokes of light, succeeding each other at intervals of five seconds, gave the most distinctive character possible…it was a most beautiful optical phenomenon."

It was the stars that first helped sailors navigate as they ventured out at night in the world's earliest leaky boats. But for thousands of years, man-made lights have helped, too. The object of Sir Robert's wonder was the light from the Fastnet Lighthouse, completed just a month before on on a clump of jagged rock at the gateway to the Atlantic Ocean. At 177 feet (54 metres) high, with a lamp the strength of 1.3m candles, the lighthouse was, as Sir Robert put it after visiting it the next day, "from the navigator's point of view, the most important outpost of Europe".

It was quickly regarded as one of the continent's most beautiful beacons. For the quality of its engineering, its smooth, cylindrical structure graced the cover of *Scientific American*, an American scholarly magazine. Its rosette of light inspired numerous poems. For more than 100 years afterwards, its light has helped steer countless people to safety. It provides the first glimmer of Europe for passengers emerging from the grey mists of the Atlantic; for ships passing the other way, it is "the teardrop of Ireland"—a farewell to familiar shores for mournful Irish émigrés.

It has witnessed excitement, and tragedy. The *Titanic* sailed past on her maiden voyage to New York in 1912. On May 4th 1915 its keepers, probably peering out from the elegant balcony on the seventh floor, saw a German submarine cheekily surface to buy the morning's catch from a local Irish fishing boat. According to Éamon Lankford, a local historian who wrote "Fastnet Rock" in 2004, they warned the Royal Navy, but to no avail. The same day, the U-boat sunk the *Lusitania*, killing 1,200 civilians on their way from America.

In more modern times, the Fastnet Race, a 615-mile dash from England to Ireland and back, brings some of the world's fastest sailing vessels hurtling around the rock each year. In 1979 a force-ten gale struck unexpectedly in the waters off Fastnet, crashing 40-foot waves over small vessels. Whole crews were swept overboard and 15 yachtsmen were drowned.

The men who built the lighthouse, usually photographed with their jackets fastened and their ties done up, were not seamen, nor would they have been particularly accustomed to the huge swells that batter that part of Ireland's coastline. They were a tiny group of civil servants, far more fascinated by the precise details (weights, measures, sizes, costs) of the engineering feat they were attempting than the human courage that the project required.

Such descriptions as they left of their work are as shorn of embellishment as the granite stonework. C.W. Scott, who managed part of the project and published its definitive history in 1906, rarely lets himself get swept away by lyricism. He uses far more words explaining the reasons for the 50mm mantles that lit the lamp than he does over the hardships endured by the workers. Those who wanted to go home too often "were gradually got rid of, and their places filled with men who were better satisfied with their rock quarters."

Yet their work, technical as it appears, is anything but prosaic. For building a lighthouse could be considered one of man's most noble endeavours. George Bernard Shaw put it like this: "I can think of no other edifice constructed by man as altruistic as a lighthouse. They were built only to serve." History bears this out. Since the beginning of seafaring, families and friends have lit bonfires at night to guide sailors home. Mr Lankford vividly paints the picture in nearby Cape Clear, an inhabited island five miles north-east of Fastnet. "From rush to splinter, to a shellful of fish oil, to candle, to paraffin and eventually to electricity, keeping the light burning has been part of the husbandry of the islander."

As far back as 261BC, Ptolemy I started building the Pharos of Alexandria, standing over 400 feet tall with an open bonfire that could be seen 29 nautical miles away. It was one of the Seven Wonders of the World and lasted 1,500 years—giving its name in many romance languages to the lighthouse. As their empire expanded, the Romans put up lighthouses as quickly as they expanded trading routes. With the Dark Ages, the lights went out; they ran the risk of attracting marauding Vikings.

But, according to "A History of Lighthouses" by Patrick Beaver, as stability returned to Europe, monks and hermits began tending beacons in lonely outposts around the British Isles. After Henry VIII's dissolution of the monasteries in Britain, their place was taken by philanthropic laymen, and lighthouses began to emerge as far across the continent as the Bosphorous. The boldest advance came in the 17th-century, when Henry Winstanley, an eccentric inventor and practical joker (he had chairs in his house that flew up in the air), took it upon himself to build a lighthouse on the lethal Eddystone Rock, 14 miles from the English port of Plymouth. Ultimately it killed him. He, his men and his Oriental-looking tower were washed away in a freak storm in 1703. But it marked the beginning of man's realisation that lighthouses could be built on the most inhospitable rocks. Two hundred years later, the Fastnet became the latest testimony to that belief.

The Fastnet Rock is about as rugged as they come. Its Irish name, An Charraig Aonair, means "The Rock that Stands Alone". Its name in Old Norse, Hvastann-ey, stood for "Sharp-Toothed Island". The rough waters round about claimed numerous lives and were sung about in 17th-century laments. But it was considered mysterious as well as dangerous. Legend had it that on the summer equinox, it would set sail and visit its neighbours; Bull, Cow, Calf and Heifer Rocks. For centuries it was part of the rich fishing grounds of West Cork's O'Driscoll clan, and the locals would not have been averse to the odd shipwreck giving them an opportunity for plunder. "Please God, send us a ship," was long a private prayer along the coast, according to one of Fastnet's keepers brought up near Crookhaven, the nearest port.

But by the Victorian era, the benefits of trade and a sense of the common good were taking hold so strongly that the importance of the safety of the sea became paramount. When the *Stephen Whitney*, an American sailing packet carrying cotton, corn, clocks and cheese, emerged from three days of dense fog in 1847, its captain got his bearings wrong and the vessel was smashed to pieces on the rocks near Fastnet. Of its 110 passengers and crew, 92 died. The disaster led the authorities to decide to mount the first

lighthouse on Fastnet, one made of cast-iron, it being the metal of the age. Completed in 1854, it stood on the highest pinnacle of the rock, but even at that height it was pounded mercilessly by high seas, and during storms the crockery would rattle off the table.

Finally, the newly formed Commissioners of Irish Lights decided on a replacement. They were lucky; much about lighthouses is a family affair, handed down from generation to generation. Their chief engineer was William Douglass, part of the Douglass family who were legends in the lighthouse-engineering business. He and his family had already built lighthouses from Wolf Rock in Cornwall to Ceylon, and when he surveyed Fastnet, he quickly realised that the existing tower was built on the wrong part of the rock. Douglass favoured the harder slate lower down facing the Atlantic head-on; the base was below high-water level at the water's edge, but that meant the tower would receive the blow of the heaviest seas before they reached full height. It turned out to be an enlightened suggestion.

Douglass's method of building was one invented by his father, Nicholas, on another lighthouse in the 1860s (and used long afterwards in British lighthouses). Concrete blocks were dovetailed into those around it, and cemented into those above and below, like a Chinese puzzle, so that it was impossible to remove any one stone without removing those above it. "This system of dovetail joggles absolutely bonds the entire structure into a virtual monolith," wrote Scott. The contract to supply the granite was won by Messrs John Freeman and Sons of Penrhyn, Cornwall. In 1897 its workers started chiselling away at 2,074 stones, each weighing from 1.7 to 3 tons to create the puzzle.

Commissioners of Irish Lights



The last rock in the jigsaw

Meticulous to a fault, Douglass ordered the contractors to assemble the tower in sections first in their Cornish yard, to ensure that not a stone was out of place. Each rock was to be delicately wrapped and shipped to Ireland. But from the start of the building work in 1898, bad weather and problems in finding enough good granite delayed the project. Douglass, used to a lifetime of such setbacks, went out to the rock in 1898 to push things along. It was exhausting work, though, and he fell ill. He never really recovered, and the "quiet and reserved man" retired in 1900. "There was probably no man in the world so well fitted by experience to carry out this important and difficult piece of work," wrote Scott, who then took over the project.

Each rock to be delicately wrapped and sent to Ireland

Scott was now technically the boss, but the execution of the project fell into the hands of another remarkable man, James Kavanagh, a young stonemason from Wicklow Town near Dublin, who had first landed on the rock as foreman in 1896 and was personally to place every stone laid in the tower. He was not a lighthouse man by background, but he had that same stubbornness of character. Grainy photographs of him show a portly, charismatic man with a bushy moustache and white jacket, always keeping up appearances.

He lived on the rock continuously for ten to 12 months of each year from August 1896 to June 1903, sleeping on a damp bed of rock close to the landing strip in quarters carved out of the rock face, known to this day as "Kavanagh's hole". He drove his men hard; the day began at 5am, and their first task each day was to clean themselves and their quarters thoroughly. There was no time for sickness. He was fastidious about safety; the men worked with no safety harnesses, but there were only a few minor accidents. As is customary on lighthouses, each man would be responsible for his own food, in this case, mainly rice, peas, tinned meat, biscuits, tea and cocoa. Those on the rock were paid three shillings and sixpence for a nine-hour day, and most stayed on the rock for the whole season, for fear of losing wages if they went ashore and bad weather then prevented them from returning. Kavanagh drove himself harder still. In the years that he allowed himself a few months off, he would return to his wife and eight children in Wicklow. Even then, his grandson James Kavanagh says, the family recall him complaining on fine days that he should be back on the rock, "not wasting time".

The white granite rocks, once shipped from Cornwall, would be dropped at a staging post near Crookhaven, then shipped out to Fastnet on a specially built steamer, the *Ierne*. Landing was impossible; the swell is so high at the rock that only about 12 times a year is a boat able to dock. Instead, the *Ierne* was moored at sea, and steam derricks from the rock and the ship hoisted the stone out into the sea before lifting it up to the tower. There, Kavanagh would tenderly tease each of the giant stones into place; only six were chipped during the whole process. When the tower was completed, the vertical variation from the plan drawn up seven years before was just 3/16th of an inch, or 0.6cm. It remains a remarkable feat of masonry. The stones are still smooth to the touch. The gunmetal windows fit perfectly. There are

elegant mosaics in the floors. Inside, there is no hint that a century of storms have penetrated the flawless exterior.

Sadly, Kavanagh had no time to admire the result of his craftsmanship. Seven years of living in a hole in the rock, progress frustrated by maverick tides and his delayed shipments, suddenly shattered his health. Having set the last stone, he went ashore with his son (also a mason on the rock) at the end of June 1903 complaining of illness, and died of apoplexy a week later. He never saw the light, which was still being assembled in Birmingham, crown the tower, let alone shine. Five days later, his obituary in the *Wicklow Newsletter* said that more than a thousand people turned out in his home town to follow his remains from the quayside to his family home. "The greatest respect was shown towards the deceased, all the business houses being shuttered and business suspended while the cortège was passing through." He was only 47 years old.

He was not the last of Fastnet's good men, however. For almost 90 years afterwards, the light, which rotates almost soundlessly in the same vat of mercury that it was built with, was tended by lighthouse keepers who kept the tradition of devout public service alive. Lighthouse engineers may be painstakingly conservative, but lighthouse keepers are just as likely to be unusual. On duty they have any number of tasks to fulfil, but off-duty there are many empty hours to fill. These might have been spent watching storms build up, fishing, reading, or making ships in bottles. Dick O'Driscoll, a keeper who spent 14 years on the rock (and is descended from the original O'Driscoll clan who fished the local waters), recalls morsemen in the lighthouse and on shore became so adept that they would flash messages—even chess moves—to each other in the clouds. For exercise, he would string a rope from the seventh-floor balcony and climb down hand over hand with no safety harness. "What did we do? Sometimes we'd sit. More times we'd sit and think," he comments wryly.

Fastnet was peculiar, he says, as he points to a picture of the lighthouse on his sitting-room wall. It may look like Alcatraz on the outside, but inside time never drags. Perhaps that is because of the weight of green and white water that surrounds one; it never stops churning. In stormy winter weather, the "big seas would come sailing up over the entire building like the field of horses in the Grand National," as one former Fastnet keeper put it. Sometimes, there were almost disastrous consequences; Mr O'Driscoll remembers a storm in 1985 when a wave reached as high as the light and came crashing through the glass, overturning the vat of mercury and sending the poisonous liquid pouring down the stairs. He doubts the tower would have withstood another wallop as great as that, but it never came. Suddenly, there was a great calmness. There were moments of deep sadness, too. Missing children's birthdays, for example, because the weather turned and the ship could not get close enough to the rock to take him ashore. What do you do at those times? "There's nothing you can do," he says. "You slowly climb back upstairs and bake more bread."

There was lots of mischief-making, though, that for a time would make the lonely rock light up with Irish laughter. In 1920 a band of volunteer independence fighters raided Fastnet at night, seizing guncotton and detonators to use against the British forces. Curiously, the doors to the arsenal had been conveniently left open that night. A few decades later, Kathleen Lynch, a young lady from Cape Clear whose talent for "hearing the weather" eventually made her invaluable to relief ships and helicopters servicing the lighthouse, also rowed out to it as a teenager. "Once there, the lads would leap out and set to operating the crane and its basket. They'd lift the girls from the boat right onto the rock. And then they'd dance Cape Clear sets, two opposite two, and do slides, a young man squeezing the box for all he was worth away out there in the middle of the sea."

Back to loneliness

Electricity came in 1969, and 20 years later the last full-time keeper left. It is now manned when it needs maintenance by Neilly O'Reilly, a local man who retains the lighthouse keeper's deep affection for the rock and the stories from its past. But there is no disguising the sense of loss that has crept in since it became fully automated. As Mr O'Reilly kicks hard to open the heavy steel doors on arrival at the lighthouse, he notes that they swing inwards. When Douglass designed them, and Kavanagh built them, they were never made to be opened from outside, because it was not envisaged that the lighthouse would be unmanned. Mr O'Driscoll refers to those doors in his letter* to the *Cork Examiner* in April 1989 when he last left the lighthouse. "The closing is a very poignant moment, as these large gun-metal doors crash into place behind me for the last time, sealed like a tomb." Once again, An Charraig Aonair was alone.

*Several of the quotes in this article were first reproduced by James Morrissey in “A History of the Fastnet Lighthouse”.

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William Tyndale

A hero for the information age

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Subversion, espionage and a man who gave his life to disseminate the Word

Getty Images



AN EMERGING nation looks increasingly confident as a player on the world stage, thanks to a mixture of commercial prowess and deft diplomacy. In its capital and in coastal cities, you can feel the excitement as small manufacturers, retailers and middlemen find new partners across the sea. But the country's masters face a dilemma: the very technology, communications and knowhow that are boosting national fortunes also threaten to undermine the old power structure.

China in the 21st century, contemplating the pros and cons of the internet? No, Tudor England, at the time when a gifted, impulsive young man called William Tyndale arrived in London—not to make his fortune, but to transform the relationship between ordinary people and the written word. As he soon discovered, London in 1523 was a city where ideas as well as goods were being disseminated at a pace that frightened the authorities, triggering waves of book-burning and repression.

As a side effect of close commercial ties with northern Europe, England was being flooded with the writings of a renegade German monk called Martin Luther, who had openly defied the Pope and insisted on a new reading of the Bible which challenged some of the Catholic church's long-established dogmas.

In some ways, Tyndale was poorly equipped to survive, let alone thrive, in this feverish atmosphere. He was no wheeler-dealer; more of an idealistic scholar whose linguistic gifts were so remarkable, and hence so subversive, that he was drawn into high religious politics.

His ruling passion was a simple one: he wanted to render the defining texts of his age and culture—the Old and New Testaments—in an accurate English translation which even "the boy that driveth the plough" could grasp. And the fact that he eventually fulfilled this aim, and paid for it with his life, should be acknowledged more frequently by anybody who cares about freedom of expression.

Thanks to a network of businessmen, Tyndale dodged from one city to another

But for many of the bustling Londoners whom the young Tyndale met, questions

of diplomacy, taxes and war were at least as pressing as those of theology or linguistics. King Henry VIII and his adviser Thomas Wolsey were trying to manoeuvre between two continental giants: the King of France and the Holy Roman Emperor, whose realms included Spain and (with varying degrees of real power) much of Teutonic middle Europe. Gamesmanship alone was unlikely to succeed unless the kingdom was willing to demonstrate its military power from time to time; so King Henry imposed new taxes and started planning an ambitious programme of ship-building.

Harsh taxation was a source of much grumbling among the sort of friends that Tyndale began to make. Denied house-room by the bishop of London, he found accommodation with a member of London's merchant class—the kind of man who was less interested in geopolitical games than in taking advantage of the new commercial relationships with the great business centres of northern Europe: Antwerp, Cologne and Hamburg.

In all these places, and in several other German cities, the art of printing books at a reasonable cost and in large numbers was more advanced than it was in England. London, however, was well supplied with book-sellers, who were prepared to shop around the continent to find material for a growing body of literate customers. Thanks to commerce, and the increasing complexity of occupations such as ship-building, the number of English people who learned to read for purely practical as well as devotional reasons was growing.

Trade between England and the continent was facilitated by a German colony in London (living near the present-day site of Cannon Street railway station) and well-established groups of English businessmen in the commercial cities of Europe. And largely thanks to this network Tyndale was able to spend most of the final decade of his life dodging between one city and another, delivering bits of newly completed work to efficient presses whose output would duly cascade into England.

Tyndale has been described as one of the fathers of English literature. An exaggeration? No, the claim stands up. It is generally agreed that the founding texts of modern English are the plays of William Shakespeare and the Authorised or King James version of the Bible. Wasn't the latter a team effort? In fact, that is only partially true. On investigation, we find one outstanding wordsmith whose prose decisively influenced the lovely cadences of the King James translation. But of course, he wasn't around when it was published; Tyndale had been strangled, and then burned to death, in Belgium, 75 years earlier, crying out as he died, "may God open the eyes of the English king."

Tyndale was ultimately more influential, and also in many ways a nobler figure than the more famous religious martyrs of the Tudor era, the Catholic Thomas More and the Protestant Thomas Cranmer. Both More and Cranmer served their time as enforcers of religious intolerance before falling victim to it themselves. No such stain sullies the record of Tyndale.

Tyndale was not a charming sophisticate like More. Like many a hyperactive genius, he seems to have lacked social grace, and was rather bad at reading the minds of people around him. The modern term for that is autistic; he would probably have found some neater way to describe a personality that is so absorbed with a rich inner world that it lacks the spare energy to decipher other people's thoughts.

His life's vision and dying supplication—for English people to have access to the Bible in their own language—came to pass (to use one of his own famous phrases) rather swiftly. A year after his death, a complete Bible—two-thirds of which had been translated by Tyndale, the rest by his associate Miles Coverdale—was published by royal permission. This electrified a nation where only a decade earlier, bishops had frantically tried to suppress copies of Tyndale's subversive work. Six copies of the new translation were put on display in Old St Paul's Church, and a spontaneous public reading of the entire text soon began. One man would stand at the lectern and proclaim the word until his voice gave out and a replacement stepped in. As a direct legacy of that heady moment, the Church of England is required by law to display a complete, accessible Bible in all its places of worship.

A candidate, then, for elevation as England's national hero? Perhaps. But look more closely at Tyndale's life, and it gets harder to present or understand him in purely national terms. In fact, what made Tyndale's achievement possible was the burgeoning of international trade in goods, ideas and technology, as a counterweight to national tyranny.

How so? Consider the monarch whom Tyndale confronted. Just as Stalin eschewed world revolution in favour of "socialism in one country", the project of Henry VIII—at least after his break with the Pope in 1530—could be described as "theocracy in one country". In other words, an effort to establish total political and ideological control by blocking out foreign influence and crushing all rival centres of power at home. To do this, he was (like Stalin) prepared to use and then discard one trusted lieutenant, and one

ideological slogan, after another.

AFP



The Book for which Tyndale gave his life

That might sound shocking. Conventional English history sees Henry through a rose-tinted haze: a rambunctious old dog whose type-alpha personality had the happy effect of freeing England from the tyranny of papal authority. Remember, though, his purpose in throwing off Roman authority was not to usher in freedom, but to pave the way for an even more ruthless theocracy of his own.

It was a commonplace of the Soviet era that only people who were slightly abnormal, and utterly indifferent to their own comfort or survival, could find the courage to protest effectively against a totalitarian regime at the height of its powers. And Tyndale fits that description rather well. The main difference between his situation and that of the Soviet dissidents is that, fortunately, Henry's England was much less successful in sealing off the realm from foreign ideas and influences.

When Tyndale went to Cambridge in 1517, the university was already bubbling with the new learning which had recently been introduced by the Dutch scholar Erasmus. Among many other innovations, Erasmus had rejected the idea that study of the Bible should be confined to a Latin version produced in the year 400. As the Dutchman argued, the proper way to decipher that text was to go to the originals (Greek for New Testament, Hebrew for the Old) and parse them with the best available tools of linguistic science.

To the sharp-minded, polyglot Tyndale, all that was obvious, and he was pretty careless about where he expressed that opinion. As tutor to the family of a gentleman in Gloucestershire, he dismissed the Church's claim to monopolise the reading and understanding of holy writ with a bluntness that startled the local clergy (even the ones who secretly agreed) and caused gossip in nearby alehouses; in other words, people said, he was siding with that German firebrand, Luther.

In the mercantile circles of London where Tyndale later found a home, people were excited not just by Luther's ideas but also by the relative freedom enjoyed by Germany's emerging statelets; the astonishing thing was not merely that Luther had protested, but also that he had actually survived the experience, and gone on to translate the Bible into German.

Thanks to the traders who had spirited Luther's works, along with more conventional merchandise, through England's ports, people in London learned what was going on in Germany with remarkable speed. And for exactly that reason, the climate in London was growing harsher.

Tyndale was helped, by Londoners with more worldly wisdom than himself, to go to Germany under a false name, with his half-completed rendering of the New Testament tucked deep inside his trunk. And from the moment he arrived in Hamburg, his life turned into a cat-and-mouse game of sneaking from one north European city to another, in search of rapid presses and nimble protectors.

Agents of the English king were fanning out all over the continent, meanwhile, there were plenty of people in the Teutonic lands (especially in the Low Countries where the Emperor was trying hard to enforce his writ) who did not want the Bible to be translated into English or any other modern language.

There was much tragicomedy in the contest between England's thought police on one hand, and the evasive powers of Tyndale, or rather his canny Dutch, German and English friends, on the other. In 1525 the bishop of London recruited what he thought was a reliable agent in Antwerp, an Englishman called Augustine Packington, who promised to buy up all the copies of Tyndale's translation of the New

Testament that were rolling off the presses and pouring into England.

The "agent"—whose real sympathies lay with Tyndale—took the bishop's money, bought lots of the offending books, and sent them to the bishop, who duly burned them in public. Imagine the bishop's dismay when—as a contemporary account has it—a new and improved edition of Tyndale's Testament began arriving "thick and threefold" in London. Tyndale had simply pocketed the bishop's money and used it to finance a fresh version of his translation.

Faced with protests from the bishop, Packington used his wits to wriggle out of an awkward interrogation. "Surely, I bought all that were to be had, but I perceive that they have printed more since. I see that it will never be better as long as they have letters and stamps, wherefore you were best to buy the stamps too, and so you shall be sure." Realising he had been outwitted, the bishop merely smiled.

The port of Antwerp, a power-house of international trade, served for a time as Tyndale's safest refuge—but it was also the place where he met his downfall. In the end, his entrepreneurial friends' cunning failed to protect him from the consequences of his own relative innocence.

Defending human dignity from tyranny can often mean sacrificing one's life

Tyndale had secured living quarters in the Antwerp home of an English merchant, Henry Pointz, who grew intensely protective of his brainy but unworldly lodger. But not protective enough, as it tragically turned out. A wealthy, mysterious Englishman named Henry Philips arrived in the port and rapidly gained Tyndale's trust, and hence access to the Pointz household. Returning from a business trip, Pointz quickly came to suspect that the oily newcomer was a spy. But he failed to prevent his translator friend walking into a horrible trap. As he emerged from the Pointz family home; the tall Philips pointed down at the diminutive wordsmith who was duly marched off to jail.

A determined eurosceptic might argue that Tyndale's capture and execution was the first, ghastly example of a pan-European arrest warrant, made possible by an early version of Europol and the Lisbon treaty. That is true, in a way: he was arrested after Henry VIII made known his feelings to the Holy Roman Emperor who was sovereign of the Low Countries.

But Henry's motives were more personal than theological. He was infuriated by a pamphlet which denounced his moves to divorce his first wife, Catherine of Aragon. Theology was moving in Tyndale's direction by the time of his death. England had half-switched to the Protestant cause, and Thomas Cromwell, the royal adviser, made a respectable stab at saving his compatriot's life. However, having recently burned ten members of the ultra-Protestant Anabaptist movement, the regime of Henry VIII could hardly present itself as an advocate of religious freedom.

Jailed in the vast and forbidding fortress of Vilvoorde, Tyndale could easily have saved his life by agreeing with the Catholic hierarchy that the Bible was best left in Latin for the clergy to peruse. But he maintained his refusal in a way that impressed his Flemish jailers. "He had so preached to them who had him in charge…that they reported of him, that if he were not a good Christian man, they knew not whom they might take to be one."

A hero for all nations, then? Whether in the land of his birth or the town of his death, Tyndale buffs are still regrettably thin on the ground, and it is hard to follow his trail. The atmosphere of medieval Antwerp can still be dimly apprehended in the foggy, cobbled streets and high gabled houses near the seafront; but nobody at the local tourist office has any idea where the "English House" was. As for Vilvoorde, the place of Tyndale's death, just a handful of keen locals have worked passionately to investigate and commemorate the local martyr. One of them is Wim Willems, a Protestant theology professor who divides his time between his Flemish homeland and central Africa.

"It's when I go to Rwanda that Tyndale's message really comes alive," he explains. "I tell my African students to think for themselves, to make own their own free and informed decisions about what is valid in their native, traditional cultures and in the cultural values of Europe, including the humanism that Tyndale personifies." And in Rwanda, more than in most parts of Europe, people can readily understand that defending human dignity from tyranny can often mean sacrificing one's life. Perhaps some of China's dissidents should consider adopting him too.

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Economist.com OPINION

Tintin

A very European hero

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A Tintin blockbuster is on the way. Baffled Americans hoping to understand him should look at him through the prism of post-war Europe


Moulinsart-Studios Herge

IT IS one of Europe's more startling laws. In 1949 France banned children's books and comic strips from presenting cowardice in a "favourable" light, on pain of up to a year in prison for errant publishers. It was equally forbidden to make laziness or lying seem attractive. The law created an oversight committee to watch for positive depictions of these ills, along with crime, theft, hatred, debauchery and acts "liable to undermine morality" among the young.

Taken literally, the law suggests that an ideal comic-book hero would resemble an overgrown boy scout, whose adventures involve pluck, fair play, restrained violence and no sex. That is a pretty accurate description of Tintin, the Belgian boy reporter who enjoyed spectacular success in post-war Europe.

Tintin's slightly priggish character fitted the times. His simple ethical code—seek the truth, protect the weak and stand up to bullies—appealed to a continent waking up from the shame of war. His wholesome qualities help explain the great secret of his commercial success—that he was, and remains, one of the rare comic books that adults are happy to buy for children.

But probity cannot explain why Tintin became a cultural landmark in Europe, as important on his side of the Atlantic as Superman on the other. There were plenty of wholesome comics in post-war Europe, most of them justly forgotten. Something else in Tintin spoke to children and adults in continental Europe. Even in the straitened years of post-war reconstruction, he was soon selling millions of books a year.

Admirers point to the quality of the drawing in Tintin, and the tense pacing of the plots, and they are right. Any child reared on "King Ottokar's Sceptre", a Balkan thriller; or "The Calculus Affair", about a scientist's kidnap, will later feel a shock of familiarity when watching Hitchcock films or reading Graham Greene. It is all there: the dangerous glamour of cities at night; the terror of a forced drive into the forest; a world of tapped hotel telephones and chain-smoking killers in the lobby downstairs.

Yet even excellence does not explain Tintin's success in Europe. For, despite his qualities, Tintin has never been a big hit in the Anglo-Saxon world. In Britain, he is reasonably well known, but as a minority taste, bound within narrow striations of class: his albums are bought to be tucked into boarding school trunks or read after Saturday morning violin lessons. In America, Tintin is barely known.

All societies reveal themselves through their children's books. Europe's love affair with Tintin is more revealing than most.

Any exploration of Tintin's hold on continental affections must start not with culture, but with history. For all the talk about morality, France's 1949 law on children's books had ideological roots. It was pushed by an odd alliance of Communists, Catholic conservatives and jobless French cartoonists, determined that French children should be reading works imbued with "national" values. Pascal Ory, a historian at the Sorbonne university (author of "Mickey Go Home. The de-Americanisation of the cartoon strip"), writes

that the main aim of the law—which, remarkably, remains in force today, tweaked in the 1950s to add a ban on incitement of ethnic prejudice—was to block comics from America.

The question of the transatlantic gap remains current. The coming year is a big one for Tintin. In 2009 it will be 80 years since the boy reporter embarked on his first adventure, a trip to the Soviet Union. In Belgium a museum is to open, dedicated to the work of Hergé, Tintin's creator, whose real name was Georges Remi. (His initials, when reversed, are pronounced Hergé in French.) Even under construction, the museum is impressive: a soaring structure of concrete and glass, wrapped around a large wooden form like the hull of an upturned ship. The seriousness of the architecture carries a message. This is not a theme park, but a gallery for high art. That is an uncontroversial view in continental Europe, especially in Belgium and France, where cartoon strips are reviewed in critical essays and dissected in academic theses.

In America filming is supposed to begin in earnest on a trilogy of Tintin films to be directed by Steven Spielberg and Peter Jackson, using digital "performance capture" technology to create a hybrid between animation and live action. Mr Spielberg secured an option to film Tintin shortly before Hergé's death in 1983. The delays seem to have been caused partly by American puzzlement at Tintin. In September 2008 Universal Pictures pulled out of a plan to co-finance the project. The *Hollywood Reporter*, a trade publication, describes the films as being about "a young Belgian reporter and world traveller who is aided in his adventures by his faithful dog Snowy", and explains that this storyline is "hugely popular in Europe". You can almost hear the baffled shrugs.

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As a journalist, Tintin is spectacularly unproductive, even by the idle standards of his trade. In all 24 albums he pauses perhaps twice to jot down a note. He happily gives rival reporters the details of his latest scoop. Only once is he seen with a completed article, on his inaugural 1929 trip to the Soviet Union. He briefly ponders how to get the manuscript to his office, before yawning and heading for bed, declaring: "Oh well, we'll think about that tomorrow." Four frames later, secret policemen are climbing the stairs to arrest him, and the article is never mentioned again.

Unlike another fictional adolescent with a media job—the American comic character Spiderman (portrayed as a freelance photographer in civilian life)—Tintin is not an outsider, or a rebel against the established order. He defends monarchs against revolutionaries (earning a knighthood in one book). His first instinct on catching a villain is to hand him over to the nearest police chief. He does not carry his own gun, though he shoots like an ace. Though slight, he has a very gentlemanly set of fighting skills: he knows how to box, how to sail, to drive racing cars, pilot planes and ride horses. He has few chances to rescue girls or women, moving in an almost entirely male, sexless world, but is quick to defend small boys from unearned beatings. His quick wits compensate for his lack of brawn. André Malraux, a French writer and politician, claimed that General de Gaulle called Tintin his "only international rival", because both were famous for standing up to bullies.

Tintin is grandly uninterested in money. He is indifferent when—on occasion—he is offered large sums for accounts of catching some villain. Hergé's disdain for transatlantic capitalism is portrayed in the 1931 "Tintin in America", in which businessmen bid each other up to offer Tintin $100,000 for an oil well. When the young reporter explains the well is on Blackfoot Indian land, the businessmen steal the land from the Indians.

European snobbery about money permeates the books. Villains are frequently showy arrivistes. Old money is good. A gift (as opposed to gainful employment) allows his best friend, Captain Haddock, to buy back his family's ancestral mansion. The captain takes to castle life with relish. Enriched by a treasure find, he swaps his seaman's uniform for an increasingly Wodehousian wardrobe involving

cravats, tweeds and at one point a monocle.

Hergé did not share his creation's lack of interest in money. He paid minute attention to marketing (in total, some 200m albums have been sold) and the production of puzzles, colouring books and toys. Though Hergé is routinely voted onto lists of "10 famous Belgians", he had no illusions about his homeland's limitations as a market. He quickly began excising references to Tintin's Belgian roots to boost his appeal on the French and Swiss markets, referring to him in 1935 as a "young European reporter". He was happy for English-language editions to leave the impression that Tintin was British. Captain Haddock's ancestral mansion changed from the Chateau de Moulinsart into Marlinspike Hall, and his most illustrious ancestor became a hero of the British royal navy, rather than a commander in the fleet of Louis XIV.

Assuming that Tintin does end up the subject of a Hollywood blockbuster, many around the world will soon think he is American. Hergé's heirs know Tintin's fame will take on quite different, global dimensions, in a way that will be hard to control. That will mark a big change.

After Hergé's death, his wife Fanny inherited the rights to his work. She remains in overall artistic control of the Hergé Studios in Brussels (day to day the studios are run by Fanny's second husband, Nick Rodwell, a British businessman). The studios are known for the ferocity with which they guard the works, scouring the world for abuses of copyright from Hergé's old offices on a smart shopping avenue.

Mrs Rodwell confesses to seeing risks in Hollywood doing Tintin. To her, the charm of Hergé's work is absolutely "European"—more "nuanced" than an American comic strip. The American style of telling a story threatens that European "sensibility", she suggests: American narratives are "very dynamic, but more violent, and are much more aggressively paced."

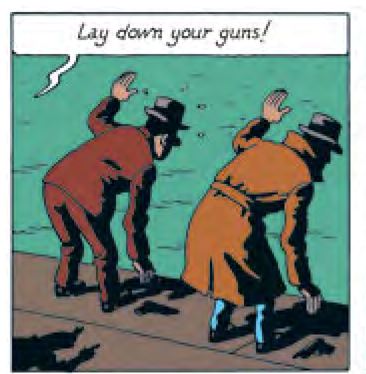
Hergé wanted the risk taken. He died days before a planned face-to-face meeting with Mr Spielberg, but had been briefed on the director's thinking by a trusted assistant, Alain Baran, sent to Los Angeles to open negotiations. Mr Baran later wrote that Mr Spielberg saw Tintin as an "Indiana Jones for kids", imagining Jack Nicholson as Captain Haddock. Such talk did not alarm Hergé. He said a film-maker like Mr Spielberg should be given free rein, and told his wife: "This Tintin will doubtless be different, but it will be a good Tintin."

Such artistic openness is perhaps surprising, given where Hergé began his career. He always said the Catholic boy-scout movement rescued him from a "grey" childhood in lower middle-class Brussels. From there, he fell in with a slightly hysterical clutch of hard-right priests and nationalists, one of whom gave him his first job, on a small Belgian Catholic newspaper, the *Vingtième Siècle*, which fervently supported the monarchy, Belgian missionaries in the Congo and Mussolini and loathed the Bolshevik atheists running Russia and "Judeo-American" capitalism.

Tintin was born in this unpromising environment, in a weekly children's supplement, *Le Petit Vingtième*. Hergé wanted to draw cartoons about the Wild West of America. His employer, an alarming priest named Norbert Wallez, had other ideas, ordering that the new fictional reporter be sent to the Soviet Union, then to Belgium's colony in the Congo.

The 1930 story "Tintin in the Congo" has done much to feed Hergé's reputation for racism. Its Africans are crude caricatures: child-men with wide eyes and bloated lips who prostrate themselves before Tintin (as well as Snowy his dog), after he shows off such magic as an electromagnet, or quinine pills for malaria.

Moulinsart-Studios Herge







In Scandinavia the staggering toll of African wildlife Tintin kills—especially a rhinoceros he reduces to blackened chunks with dynamite—has prompted additional angst. The book remains popular in Africa, Hergé defenders like to assert. But, in truth, it has lost any charm it ever possessed. It is a work of propaganda—not for "colonialism", as is often said—but more narrowly for Belgian missionaries, one of whom keeps saving Tintin's life in evermore ludicrous ways: first dispatching a half dozen crocodiles with a rifle then rescuing him from a roaring waterfall, seemingly unhindered by his advanced age and ankle-length soutane.

Hergé's reputation is also marked by charges of anti-Semitism. He received many complaints about one of his villains, the hook-nosed New York financier, "Mr Blumenstein". It does not help that this caricature appeared in "The Shooting Star", an adventure written in 1941 while living in Brussels under Nazi occupation. In the field of devout Tintinologists, much effort has been put to explaining this "lapse" away. Michael Farr, a British expert on Tintin, is typical, writing in 2001 that as soon as Hergé realised that his character was "liable to misunderstanding", he gave Blumenstein a different name and a new nationality, having him hail from "São Rico".

Tintinologists have a ready explanation too for another lapse: the fact that Hergé spent the war working for *Le Soir*, a Belgian newspaper seized by the German occupiers and turned into a propaganda organ. This is usually explained by Hergé's "naivety", as an author of children's comics (a defence also used for P.G. Wodehouse).

Alas, none of those arguments survive a reading of a biography of Hergé by Philippe Goddin, published in 2007. Mr Goddin's honesty is commendable: his is an official biography, based on Hergé's large collection of private papers.

Mr Goddin returns to "The Shooting Star", and its initial newspaper serialisation in *Le Soir*. This included a strip about the panic unleashed when it seemed a giant meteorite would hit the earth. In one frame, he writes, Hergé drew two Jews rejoicing that if the world ended, they would not have to pay back their creditors. At that same moment in Belgium, Mr Goddin notes, Jews were being ordered to move to the country's largest cities and remove their children from ordinary schools. They were also banned from owning radios, and were subject to a curfew. In the news pages of *Le Soir*, these measures were described as indispensable preparations for an orderly "emigration" of Jews. A year later, Hergé deleted the drawing of the Jews of his own accord, when the serialised "The Shooting Star" became an album.

Mr Goddin demolishes the excuse of naivety, thanks to papers found in Hergé's files. As early as October 1940, he records, Hergé received an anonymous letter accusing him of luring Belgian children to read German propaganda, by publishing Tintin in *Le Soir*'s youth supplement. A few months later, Hergé had a bitter argument with an old friend, Philippe Gérard. In a letter, Gérard demanded Hergé either endorse the "odious propaganda" of *Le Soir* or make his disagreement with the German occupation known. Saying it was just "a job" would not do, his friend concluded.

By way of reply, Hergé offered a defence of neutrality. "I am neither pro-German, nor pro-British," he wrote back. "As I can do absolutely nothing to hasten the victory of either England or Germany, I watch, I observe and I chew things over. Calmly and without passion." His aim was to remain an "honest man", Hergé wrote, which did not mean shouting "Heil Hitler" or volunteering for the Waffen SS. Some said German occupiers were pillaging Belgium. An honest man had to acknowledge this was not true.

There is a link between Hergé, this disappointing man, and his creation Tintin, who fights against despots so bravely. It lies in the rationalisation of impotence: a very European preoccupation.

The key to Tintin is that he has the mindset of "someone born in a small country", says Charles Dierick, in-house historian at the Hergé Studios. He is "the clever little guy who outsmarts big bullies". And as a little guy, even a clever one, Tintin's bravery works within limits: he rescues friends, and foils plots. But when he finds himself in Japanese-controlled Shanghai, in "The Blue Lotus", he can do nothing to end the broader problem of foreign occupation.

Hergé's final complete adventure, the 1976 "Tintin and the Picaros", offers the clearest expression of this doctrine of neutrality. Tintin finds himself summoned to rescue old friends from a civil war between two Latin American warlords. One general is backed by "Borduria", a fictional but identifiably Communist-block nation. The other is financed by the (presumably American) International Banana Company. Tintin does not take political sides. He contents himself by backing the rebel general in exchange for his friends' freedom, and a pledge that the revolution will be bloodless, with no executions or reprisals. That focus on

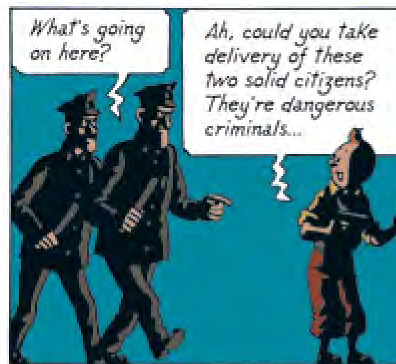
the death penalty is an extremely European way for Tintin to remain a “man of good faith”, to borrow a phrase Hergé used about himself. There is no wild talk of promoting democracy, or even regime change.

Interviewed late in life, Hergé acknowledged the links between his wartime experiences and his moral outlook. The second world war lies behind a great deal in Tintin, just as it lies deep beneath the political instincts of many on the European continent. It matters a lot that the Anglo-Saxon world has a different memory of that same war: it is a tragic event, but not a cause for shame, nor a reminder of impotence.

Tintin has never fallen foul of the 1949 French law on children’s literature. He is not a coward, and the albums do not make that vice appear in a favourable light. But he is a pragmatist, albeit a principled one. Perhaps Anglo-Saxon audiences want something more from their fictional heroes: they want them imbued with the power to change events, and inflict total defeat on the wicked. Tintin cannot offer something so unrealistic. In that, he is a very European hero.

Moulinsart-Studios Herge







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International man of mystery

Flying anything to anybody

Dec 18th 2008
From The Economist print edition

The rise and fall of Viktor Bout, arms-dealer extraordinaire, shows a darker side of globalisation

EPA



VIKTOR BOUT knew, long before his plane lifted off from Moscow, that they meant to snatch him. For years he had hunkered down in the Russian capital, making only rare forays abroad. Western spies, the United Nations and do-gooder activists were after him. They said that he had smashed arms embargoes and struck deals with a remarkable axis of ne'er-do-wells: supplying weapons and air-transport to the Taliban, abetting despots and revolutionaries in Africa and South America, aiding Hizbullah in Lebanon and Islamists in Somalia. He also found time to supply American forces in Iraq, perhaps al-Qaeda too, and maybe even Chechen rebels.

He denied all wrongdoing and, no doubt, thought his accusers irritating and hypocritical. But until the fuss died away he knew that he was safe only in Russia, from where extradition was impossible.

Yet Mr Bout, a puzzling, amoral and intelligent man, made a poor choice in March, leaving behind his wife and daughter and flying to Bangkok. As a consequence he may end up in New York as the star of a trial that would provoke echoes of cold-war spy games, further chilling relations between the West and Russia.

A shy and plump man, for years his only public image was a grainy, Soviet-era passport photo. That shows a dumpy, youngish face, with drooping eyes peering above a thick, triangular, moustache—the sort one might buy in a joke shop. He was probably born in what is now Tajikistan but, as with the picture, details of his life are fuzzy. American prosecutors say that he uses at least half a dozen passports and more aliases, including "Butt", "Budd", "Boris", "Bulakin" and "Aminov". A gifted linguist, he slips easily between as many languages as he has names.

He rose to the rank of major in the GRU, an arm of the Soviet armed services that combined intelligence agents and special forces—in British terms "a combination of MI6 and the SAS", says an academic. Clandestine work in Africa prepared him for his future career. Mark Galeotti, of Keele University, believes that Mr Bout suggested to his military bosses in 1993 that he went into "active reserve", taking surplus aircraft to trade stuff in Africa and beyond.

Unofficially, he would have given payments to his old chiefs as planes and other stock were released. His

goal was not nationalistic: it was to get rich quickly. “He enjoys the buzz of doing something well,” says Mr Galeotti. Those who studied at language school alongside Mr Bout recall him not as a thrill-seeker, but as a swot who relished success.

Mr Bout chose a useful time to come of age. As the Berlin Wall tumbled, supplies of surplus weaponry and fleets of military transport aircraft were up for grabs. Soldiers and air-force men, even senior ones, were poor and easily bribed; stocks of weapons, especially in remote corners such as Moldova, were barely monitored.

With supply assured, demand for his goods and services grew. As most outsiders abandoned interest in Africa and Central Asia, poorer governments lost their cold-war sponsors and many then collapsed, allowing wars to flourish. Where America and the Soviet Union had once vied to dump weapons on friendly governments, now Mr Bout stepped in. Arms-traders were not new to Africa, but space opened up for men such as Mr Bout.

Another boom in the 1990s was the provision of humanitarian aid during conflict, such as the wars in Somalia and Congo. Donors wanted to get goods—personnel, tents, food, medicine and the like—to remote airstrips. Mr Bout had big, rusty aeroplanes for hire to all comers.

His business, as detailed in “Merchant of Death”, a book by Douglas Farah and Stephen Braun, two American investigative reporters, proved vastly profitable—an associate claimed this year that Mr Bout was worth $6 billion. It was also intensely complicated. He set up fast-changing firms with many fronts and names, providing air-logistics and weaponry to any client who could pay.

He shifted the paperwork of his planes, at times in mid-flight, registering them in far-flung corners such as the African dictatorship of Equatorial Guinea. His pilots learnt to travel with a pot of washable emulsion paint, ready to daub new identification numbers on the fuselages. At his peak he had over 50 aircraft, including huge Antonovs, on his books.

He avoided cameras and questions yet gradually became an anti-celebrity, the most notorious arms-dealer on the planet. In the 1990s activists, notably from Global Witness, a London-based group which studies the links between wars and natural resources, showed how sales of “blood diamonds”, oil, gold, timber and other commodities help to fuel conflicts.

Lord of war

Some rebels, such as the Revolutionary United Front in Sierra Leone, bartered diamonds directly for guns. But there were arms embargoes, and trade is not easy in mountains and forests, using bumpy airstrips where aircraft can be smashed to bits if they are not first shot from the sky. The more that such wars are financed by illicit trade in commodities (rather than by the old cold-war means of outsider sponsorship for local forces) the more that entrepreneurial dealers such as Mr Bout can flourish.

Mr Bout’s genius was to employ impoverished ex-Soviet pilots, ready to risk their lives for hard currency, and to send his aircraft anywhere they were needed (he rarely flew on them himself). At times that meant getting United Nations peacekeepers into Somalia, or delivering aid for the British government. More often, as the UN eventually described, he provided the logistics that kept cruel civil wars alive. Reportedly Mr Bout supplied, simultaneously, both the rebels and the government during Angola’s civil war.

Similarly, he collaborated first with the Northern Alliance in Afghanistan and then, after one of his aircraft was impounded for months by the Taliban, switched to trading with the Islamists. He probably helped the American forces to fly material to Afghanistan and certainly did so in Iraq. He was active in eastern Congo, where years of war have led to the deaths of millions. Alex Yearsley of Global Witness sums up his career thus: “There’s nothing he hasn’t done.”

One particularly favoured client made him prominent: Charles Taylor, the Liberian despot now on trial in The Hague for war crimes in Sierra Leone. Mr Taylor helped to spread wars in west Africa, arming insurgents who were able to weaken neighbouring governments. Mr Bout worked closely with him. But as the arms-dealer’s infamy grew, so did the efforts to put him out of business.

AFP

A British minister, Peter Hain, did his bit by coining two annoyingly catchy nicknames, dubbing the Russian the "sanctions buster" and the "merchant of death". In its turn Hollywood produced "Lord of War", a fictional tale based on stories of his gun-running. (The producers reportedly used one of Mr Bout's planes when filming.) Mr Bout thought the film was rubbish and said that he felt sorry for Nicolas Cage, who played him as an arch-villain. Another film is in the works, said to star Angelina Jolie. Other books and dramas will follow.



Charles Taylor, a valued customer

The trouble was that as the myth of Bout grew, the notoriety helped his business. He had a reputation as a physical man and reportedly intimidated rival arms-traders in West Africa. Mark Kramer, a Harvard academic who has followed his career, calls him ruthless and violent when necessary. His minions liked to boast of his nicknames. And the myth-making helped to advertise his advantages: linguistic fluency; contacts from warlords to presidents; his access to weapons; his ability to air-drop anything, anywhere (would you like a miniature sub parachuted to the jungle?).

But fame can be awkward, too. It helped to chase him from a comfortable home in South Africa (he may also have been worried about crime), then from the Middle East. In time his notoriety limited the travel that he loved. America put him on a blacklist of businessmen with whom it is illegal to trade.

He may perhaps have felt a little misunderstood, seeing himself as a canny entrepreneur, not a Bond villain. His accusers put little store in his concern for conservation, his love of animals, his wish to protect Congo's forests, his earnest desire to help the pygmies of central Africa and his devotion to the Discovery television channel. Some of his critics may even have been jealous. He deployed more aircraft than do some countries.

Take-away chicken

His defenders describe him as nothing more dangerous than a flying lorry driver. If one week he made profits by dropping frozen chickens in west Africa, and the next by trading gladioli from Johannesburg to the Middle East, who was to care that, in between, he delivered a few million rounds of AK47 ammunition to a central African army? Americans did not object when he supplied an Antonov An-24 to deliver goods for their soldiers in post-invasion Iraq. So what if he is also rumoured to have ferried gun-toting and bearded men to and fro in the Middle East?

Certainly, he is no typical member of the Russian mafia. His clothes are understated but stylish; he favours a dark suit, a shirt open at the neck. No bling hangs on him; no scantily clad women sit on his knee dropping grapes into his mouth. At parties in Moscow, it is true, he was flanked by his bodyguards and young women who hovered, twittering at his unsmiling jokes. Supplicants also jostled to stand at his feet, wheedling for contracts, but that was how his business was done.

He liked to have the curious brought to him: at one party a British academic, who studies underworld types, was presented for a conversation. He left apparently impressed by the ironic twinkle in the Russian's eyes, concluding that: "He is one of the most engaging merchants of death I have come across."

His triumphs could not last. Mr Bout flourished in the interregnum between the cold war and the rise of Islamist terrorism. He was carried along by the same factors—the spread of communications technology, the easier flow of goods over borders, international transfers of money with few questions asked—that spurred globalisation. But when political conditions changed, Western governments began to worry that arms-dealers might be getting in league with terrorists. The space for Mr Bout began to shrink.

Being cautious and well-informed, Mr Bout knew that Westerners were trying to grab him. In 2002, as he flew from Moldova to Greece, he was somehow tipped off that British agents were waiting in Athens. The plane dropped him in a third country, leaving the spies to pounce on thin air. Two years later a trap was laid in Madrid but terrorist bombs intervened, preventing his travel. A dubious-sounding Moldovan firm had also, it is rumoured, once tried to lure him to Sudan, perhaps as a plan to have him snatched.

By 2008 the prospects of nabbing him looked remote. The two American authors who documented his

career in “Merchant of Death” concluded that Western spies had “largely given up the chase”. Nor would Russia hand him over: Vladimir Putin had no wish to see America put a Russian in the dock and portray him as Dr Evil. It seemed that his story would end with seclusion in Moscow.

And yet, in March this year, his guard slipped. Mr Bout stepped off a plane in Thailand, made his way to the five-star Sofitel in Bangkok and checked into a 14th-floor suite. His wife, who runs a fashion business, says loyally that he had travelled to do a cookery course. Sergei Ivanov, a Russian MP, claims that he had gone “to gather information on the aviation and construction business”. His bodyguard offered a third story: they planned a great holiday and a visit to a medical centre.

Agents from America’s Drug Enforcement Administration (DEA), who recorded every word spoken by Mr Bout in his Bangkok hotel, tell a more convincing tale. The Russian made his way to a conference room on the 27th floor and met two men who, he believed, represented a left-wing Colombian group, the FARC. For roughly two hours they discussed how he would deliver on a long-planned arms deal.

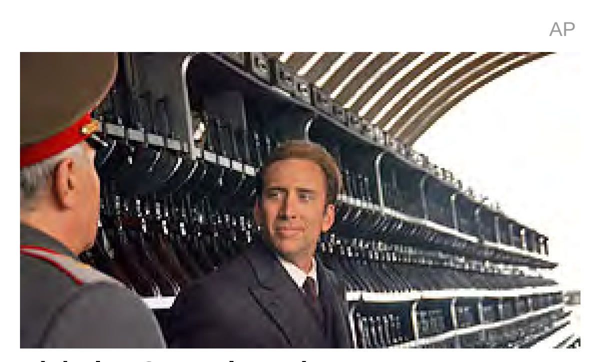
Tempted by money and by the chance of a last adventure

He said that he understood the Colombians needed anti-aircraft weapons to shoot down American aircraft. And he offered to sell enough weapons to restart a large war: 700-800 surface-to-air missiles; 5,000 AK47 rifles; 3m rounds of ammunition; landmines; night-vision goggles; plus some “ultralight” aeroplanes that could be equipped with grenade launchers and missiles. He asked where American radar stations were located in Colombia and offered to sell two cargo planes for delivery of the goods. The price? A downpayment of at least $15m or $20m would do nicely.

The two men were also agents from the DEA who had spent months on the sting. Other agents and 50 local police had been staking out the building since dawn. The police burst in, guns drawn, and snapped handcuffs on Mr Bout, who merely cried out that “The game is over.”

As with so much of Mr Bout’s life, the sting could have been lifted from a Hollywood screenplay. The Russian now says that he was set up. In September the Russian parliament called for their businessman to be freed, condemning an effort to “damage the interests and reputation of Russia”. But an indictment by American prosecutors, listing grand-jury charges and evidence, shows how keen Mr Bout was to trade with the FARC.

AP



Nicholas Cage glamorises Bout

The Americans had played a clever game. In January they duped a close collaborator of Mr Bout’s, Andrew Smulian, a Briton, into believing that three DEA agents, whom he met in Curaçao in the Netherlands Antilles, were really from the FARC. They handed Mr Smulian $5,000 for expenses and told him that they wanted millions of dollars’ worth of weapons.

They gave him a mobile telephone which they claimed could not be monitored (it was, naturally). He rushed off to Moscow to discuss the deal. Mr Bout was cautious, asking Mr Smulian to pick out his contacts from photos of known FARC leaders, but even so he was somehow persuaded.

The disguised DEA agents then met Mr Smulian repeatedly, hopping between Copenhagen and Bucharest. Once Mr Smulian boasted that his boss was known as the “merchant of death”, and said that 100 surface-to-air missiles could be delivered immediately—for $5m they could be taken from Bulgaria and dropped where needed. At one meeting he flipped open a laptop to show pictures of armour-piercing rocket launchers and missiles that he said Mr Bout could provide, along with “special helicopters”.

Mr Smulian, eager for the lucrative exchange, convinced his boss that it was safe to go on. The Russian

then agreed to close the deal in person and received an e-mail address (bogotazo32@yahoo.com) for communication. According to MotherJones.com, which published a detailed study of the sting, Mr Bout was poised to fly to Romania in February, where the DEA agents would have grabbed him. But at the last minute he was warned off by a nervous associate. Remarkably, however, he agreed to go instead to Bangkok.

Mr Smulian was also nabbed and now faces prosecution in New York. Mr Bout's fate is still undecided. Prosecutors in New York want to try him for assisting a terrorist group and have spent the year seeking his extradition. Russia's government wants him back. Thailand, too, may hope to prosecute him for dealing with terrorists.

For now he sits in Klong Prem special prison in Bangkok and appears, monthly or so, for extradition hearings. He has been humiliated by his arrest, and by his regular parade in unflattering prison garb of orange shorts and T-shirts. He scowls and laughs, walks in shackles and denies all wrongdoing. He has not dished dirt on his collaborators, but his reputation as a man who could outfox Western opponents is gone. He is thinner and his moustache has grown spikier. Difficult months await.

A big question remains. Why did he leave Moscow when he had proven so skilled at sniffing out risks? A comparison worth drawing is with his swashbuckling English equivalent, an old Etonian-turned-SAS-officer-turned-mercenary, Simon Mann, who launched a failed coup plot in Africa in 2004. The middle-aged Mr Mann pushed on with his hare-brained scheme even when he knew that he should have called it off. He was tempted by money and, perhaps more important, by the chance of a last adventure while showing off to his younger wife.

Mr Bout, too, had a myth to feed, money to make, a wife to impress and middle age creeping up. He may have disparaged his portrayal by Hollywood but he knew, too, that quiet retirement in Moscow was no way to keep a name in lights.

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Oysters

Gem of the ocean

Dec 18th 2008 | CAMBRIDGE, MARYLAND
From The Economist print edition

A dozen ocean-cleaners and a pint of Guinness, please

Bridgeman Art Library



JUST as household trash tells you a lot about a family, so mankind's rubbish heaps reveal much about the species. One of the best lies in the waters around Manhattan. There, archaeologists have found mounds of oyster shells, known as middens, dating back to 6950BC.

People have fed on oysters so long that the man whom Jonathan Swift called brave for first eating one is quite out of range of history's eye. Sergius Orata, a Roman engineer who lived in the first century BC, cultivated oysters in southern Italian lakes by bringing them to spawn on rock piles that he surrounded with twigs. Larval oysters settled on the twigs, which the cultivator could monitor easily; when the oysters grew to marketable size, they were plucked off and sold.

In Manhattan the oyster trade really took off with the arrival of Europeans: as Mark Kurlansky writes in the opening to "The Big Oyster", his marvellous examination of the dark and salty crossroads where bivalency and humanity meet, "To anyone who is familiar with New Yorkers, it should not be surprising to learn that they were once famous for eating their food live." Yet had the Europeans examined those shell mounds more closely, they would have found something ominous: the shells grow larger toward the bottom. Left alone, oysters never stop growing. The largest ones were taken first. As more people arrived, the average oyster's lifespan fell: even in pre-European America, overfishing threatened.

Those ancient New Yorkers and the Dutch and English who followed plundered the area's oyster supply without a second thought. The waters around New York once teemed with oysters, as did those around London. Both cities were built on estuaries, allowing the constant yet changing mixture of fresh and salty water that oysters love. Both cities progressed rapidly from manufacturing to industrial to financial capitals, and in the process, voraciously abetted by the appetites of their citizenry, both killed their oysters (Paris, the third great oyster metropolis, protected its beds far more successfully, and to this day shuckers presiding over crates of oysters packed in ice remain a common sight on the city's corners in winter). In so doing, New York and London may have destroyed something far more than a delicious source of protein: oysters are not only among the strangest and tastiest creatures in the sea, but as far as the health of marine ecosystems go, they may also be the most important.

Edible oysters fall into one of five main species: *Ostrea edulis*, the European oyster, is the most regular, rounded and attractive in appearance; they are most often sold as Galway or Mersey flats in Britain and Ireland and *belons* in France (like wine, oysters take on characteristics of the terroir, so to speak, in which they are raised; the wildly different tastes result not from biology but from the variant diets,

temperatures and salinity offered by the water in which the individual oysters spend their lives). *Ostrea lurida*, sold most often as the Olympia, is the only species native to America's west coast; it is small, sweet and tastes of grass and earth rather than the sea.

Crassostrea sikaema, known as Kumamotos, are small and quite deep-shelled; they were brought to America' s west coast from Japan's Kumamoto prefecture, and have a crisp texture and a taste that is reminiscent of melons or cucumbers. *Crassostrea gigas* are native to the Pacific but grown around the world—notably in France as the green-tinged Marennes-Oléron and the *fine de claire*.

C. gigas are closely related to *Crassostrea angulata*, formerly known as the Portuguese oyster. The story goes that *C. angulata* were introduced to northern Europe, particularly France and Britain, when a ship carrying a cargo of Portuguese oysters, took shelter from a storm in southwestern France. Believing his oysters ruined, the captain jettisoned them. They flourished. It was either these or *O. edulis* that M.F.K. Fisher, an American food writer, had in mind when she recounted an old recipe for a single roasted oyster: "You start with an oyster. You put it inside a large olive. Then you put the olive inside an ortolan (a wee bird called 'the garden bunting', in case you are among the underprivileged), and the ortolan inside a lark, and so on and so on. In the end you have a roasted oyster. Or perhaps a social revolution."

The teardrop-shaped *Crassostrea virginica* thrive on America's east coast, and can appear in guises as diverse as the small, intensely briny Malpeque, from Prince Edward Island, to the large and sweetly bland Apalachicola, from Florida. Historically, however, most *virginicas*—a significant portion, if not an outright majority, of oysters eaten in America, from the time of the Civil War until the mid 1980s—came from the Chesapeake Bay, situated mostly in Maryland but with a watershed stretching 64,000 square miles across six states and the District of Columbia.

Although the Chesapeake region might be best known for its blue crabs, in fact oyster harvesting and processing formed the most commercially viable operation in the region as far back as the Civil War. And the waters teemed with oysters long before that: when John Smith first sailed into the Chesapeake in 1608, he wrote that they "lay as thick as stones"—so profuse, in fact, that they made navigation difficult.

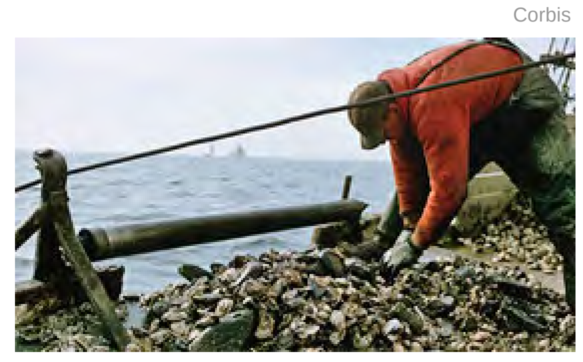
The stone-thickness of the oyster beds that Smith saw attest not just to the Chesapeake's ideal salinity—situated as it is just in from the Atlantic, and fed by dozens of rivers from across the watershed—but also to the beds' age: left undisturbed, oyster beds would indeed thicken impressively, because oysters like setting their shell nowhere as much as on the back of another oyster shell, because they grow larger the longer they live, and because proximity aids successful spawning. Spawning occurs in the warmer part of the year—hence the historic injunction against eating oysters in months that lack an R. This has nothing to do with illness (though obviously oysters, like other raw meat, spoil faster in warm weather), but because, as Ms Fisher reminds us, "oysters, like all men, are somewhat weaker after they have done their best at reproducing"—the meat tends to be thin and flat-tasting. They spawn by releasing gametes into the water: a female Atlantic oyster tends to release clouds of eggs in a series of wet puffs, while males send sperm forth in a stream. But male oysters can spawn in the style of females, and vice versa; and hermaphroditism, in which eggs and sperm shoot out of the same oyster at the same time, also occurs, albeit rarely.

Fertilisation occurs when opposite gametes meet in the water: hence the advantage offered by proximity. Generally, the male releases his gametes first, which acts as a signal to any females nearby. The spawning process takes about 45 minutes, during which a female will emit anywhere from 10,000 to around 60m eggs, only a small fraction of which will be lucky enough to meet their mates. Once the pair of gametes connect, they become a larva that drifts and swims in the tidal current, propelling itself by means of a little organ ringed with cilia called a velium. This is an oyster's only taste of free movement. When the larva grows to around 300 microns (roughly one-third of a millimetre), it extends its foot and seeks a suitable surface on which to set. Having found one, it grows into a spat, which when seen beneath a microscope already resembles a tiny oyster, with the shape of a shell already visible. It prefers settling on hard, chalky surfaces. Farms often use tiles as the foundations of their beds, but when given a choice spat seem to prefer oyster shells.

And there's the rub: most of the Chesapeake Bay's oyster operations have been public fisheries rather than aquaculture—anyone with a license could take oysters from state-owned bars, and though size and number limits were set, often they were more honoured in the breach than in the observance. Once a tipping point was reached, oysters were too far apart for enough of their gametes to meet, so the population could not sustain itself. And those few larvae that were lucky enough to live long enough to extend a probing foot too often found only silt. The oyster population in the Chesapeake today stands at just 1% of its pre-1980 levels.

It wasn't just overfishing that depleted the oyster population. Between 1950 and 2000 the human population of the Chesapeake Bay watershed region has more than doubled, from 8m to over 16.7m. The Eastern Shore, long a relatively isolated patch of America's east coast best known for the odd quasi-Elizabethan English spoken by its inhabitants, became an increasingly popular weekend and second-home destination. Dick Cheney and Donald Rumsfeld have weekend homes in the harbour town of St Michaels. Mr Rumsfeld's is called Mount Misery: Frederick Douglass, a renowned American abolitionist and statesman, was enslaved there in the early 19th century.

Corbis



Scraping the sea bed in Chesapeake Bay

The charm is obvious enough: rather like the Norfolk Broads, it contains few breathtaking vistas but, taken as a whole, its quiet, undulating, slithery beauty and ramshackle little towns leave few unmoved, and if your correspondent had to choose a place to see his last sunrise, this might be it. Of course, every golf course, condo development and chain restaurant chips away at the very thing that made people want to move there in the first place. And they inevitably bring environmental problems: sewage, agricultural run-off and increased burning of fossil fuels, all of which produce large quantities of pollutants, which find their way into the bay.

As far as the health of marine ecosystems go, perhaps no single pollutant does more harm than nitrogen. It occurs naturally in human and animal waste. Fossil-fuel combustion produces nitrogen oxides, which rise into the atmosphere and come down in rainfall as nitric acid. And fertilisers often contain large quantities of nitrogen, which seeps into the groundwater and is washed into the bay. In the water, nitrogen serves as a major nutrient for microscopic organisms called phytoplankton. Individually, they are invisible to the naked eye, but when present in large quantities they cause massive blooms, clouding the water reddish, green, yellow or brown and preventing sunlight from filtering through the water. Also, as these phytoplankton die, they, like all organic matter, are eaten by bacteria, which, also like all organic matter, breathe, using up valuable oxygen in the water. Nitrogen thus harms aquatic life in two ways: by allowing phytoplankton to live, it keeps sunlight from reaching underwater plants and grasses, which removes an important source of food and habitat for numerous marine species. And the bacteria that feed on dying phytoplankton use oxygen, leaving less for fish and crabs.

Fortunately, few species filter nitrogen from the water as effectively as oysters—as Bill Goldsboro, a senior scientist with an environmental advocacy group called the Chesapeake Bay Foundation, explains, "The oyster is pretty particular about what it eats, but it's not particular about what it filters." A single oyster can filter about 50 gallons of water per day. A few decades ago, the Chesapeake had enough oysters to filter the entire bay every week: that same task would take its existing population a full year. As an oyster eats plankton, it draws in everything else around it, including nitrogen; what it does not eat it expels into the water as solid pellets of waste, which eventually decompose and bubble up into the atmosphere as nitrogen.

In oyster-farming, both economics and the environment win

The efficacy with which an oyster expels everything that displeases it puts paid to a long-standing myth: that pearls are formed when a grain of sand gets into an oyster (or other bivalve), and it protects itself by forming shell material around the intruder. Oysters live in sandy beds; they constantly ingest and expel the stuff. A pearl actually begins from a parasite adhering to an oyster's mantle, which is a thin organ that surrounds the inside of its shell. The mantle secretes nacre, or mother-of-pearl, by synthesising calcium carbonate from materials in the water. If a parasite tears off a bit of the mantle and carries it to another part of the oyster's body, that piece of mantle will still secrete nacre, forming a pearl sac around the parasite, which, over years, turns into what people consider a jewel.

This happens very rarely, and so, on a blustery Saturday morning on the Eastern Shore, when the

wheezing remnants of Hurricane Gustav turned sky and water alike pearl grey and your correspondent held 6m oysters in the palm of his hand, he was, alas, fairly certain that none of them would facilitate his early retirement. The oysters were being grown in a hatchery run by the University of Maryland just off the Choptank River, on Maryland's Eastern Shore. Like most rivers in Maryland, the Choptank flows into the Chesapeake. Its mixture of salty water from the bay and ocean and fresh water from streams in the mountainous west of the state make it a perfect habitat for oysters, and thus an ideal testing ground for a theory: it is not so much that oysters live in clean water, as that water with an abundance of oysters in it will be clean. In other words, dirty water doesn't drive away the bivalves; rather a lack of bivalves invites the filth.

Landov



Predators going after the oysters

Don Meritt, a bluff, burly, deeply-tanned PhD waterman who runs the hatchery (and whom everyone—university president and beaker-scrubber alike—calls Mutt) explains that this is a gross oversimplification, but it contains a grain of truth. "Oysters aren't the magic bullet, but they're an important bullet," he says. Dr Meritt has been studying oysters for the university since 1972. His kingdom is a warren of green-roofed institutional buildings hulking alongside a winding two-lane road, near enough to the Choptank to use its water, which flows in through underground pipes. Inside, oysters spawn in black plastic tubs; algae in every shade of drab seethe and multiply in glass jugs; and cheery young students hunch over notebooks. The future of the bay—and more than just the bay, if the experiments work—may depend on what happens here, for oysters are a keystone species: if they thrive, others will too.

Oysters filter nitrogen, and their beds offer the same multispecies home as hard coral in the tropics. Oysters have relatively few natural predators: mainly starfish, which attach themselves to the shell with multitudinous teeth and patiently chew through, and the oyster drill, a species of carnivorous snail that attaches itself to a mollusc shell with a multi-toothed organ and inserts its proboscis, which releases enzymes that digest the creature in its home, making it easy to hoover up. Watermen once tried to defeat starfish by cutting each one they dragged up in half; unfortunately, since they regenerate, this doubled the starfish population. Even a few predators, however, attract predators of their own. And as the oysters remove both plankton and nitrogen from the water, it grows clearer, allowing eelgrass and other species of marine plants to return, which provide comfortable shelter for crabs, scallops and other aquatic life.

In the hatchery, oysters grow from larvae to spat; a group called the Oyster Recovery Partnership (ORP) then carries the spat out to the Chesapeake or one of its tributaries and places them in an oyster bed. In 2008 the ORP planted over 450m hatchery-raised oysters. Not all will live, of course, but many do: over 200m through the ORP's efforts alone, since 2007, totalling around 1,100 acres of new oyster reefs (historically Maryland held about 200,000 acres of oyster reefs; today it has about 36,000). Half of the oysters have been seeded in sanctuaries and cannot be harvested; the other half are in managed-reserve beds, which watermen tend and can harvest from once they reach marketable size. Only a small portion of available oysters will be harvested, whether publicly or privately; most will be left in situ for the environmental benefits they provide.

And Maryland will likely turn away from public fisheries and toward private ownership of beds—after all, people tend to take better care of what they own. Fortunately, farmed oysters, unlike other seafood, suffer no decline in taste. They grow, breed, eat and filter just as they do wild. Indeed, oyster farming is one of the few situations in which both economics and the environment win: any body of water that can support a vibrant oyster industry will almost certainly be cleaner and more vital than one that cannot. Farmed salmon may turn flabby, bland and, without the addition of dye to its diet, dully grey, but eating an oyster will always be, as Léon-Paul Fargue, a Symbolist poet, said, "like kissing the sea on the lips".

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Board game

Credit Crunch

Dec 18th 2008
From The Economist print edition



You will need:

The board from the centre of *The Economist*'s Christmas issue (or pdf version of board below)

These rules

Risk cards, currency and icons from the pdfs below (or you can use your diamond cufflinks, or any other mementos of your former wealth, to represent you on the board)

Four coins

Scissors (to cut out currency and cards)

Three or more players; probably six at most

How it works

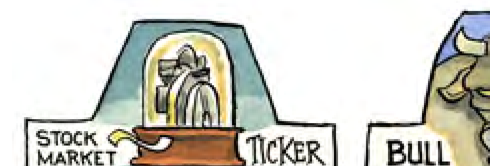
Players start with 500m econos each. One player doubles as banker.

Players move round by throwing four coins and progressing as many squares as they throw heads. If a player throws four heads, he moves forward four spaces and has another turn; if he throws four tails, he throws again. When a player lands on a + square, he collects money from the bank; equally, when he lands on a minus square, he pays the bank.

The aim is to be the last solvent player. In order to achieve this, players try to eliminate the competition. Risk cards encourage players to pick on each other.

Players who cannot pay their fines may borrow from each other at any rate they care to settle on—for instance, 100% interest within three turns. They should negotiate with the other players to get the best rate possible. Players who cannot borrow must either go into Chapter 11 or be taken over.

Players may conceal their assets from each other.







Chapter 11

When a player gets into debt and can't persuade anybody else to lend to him, he goes bankrupt. A player who goes bankrupt three times is eliminated.

A bankrupt player must move to the Chapter 11 cell and stay there until:

1. He uses a "Get out of Chapter 11" card

2. He rolls four heads or four tails during his turn

3. He is taken over

A player coming out of bankruptcy goes to START.

If a player cannot escape Chapter 11 for five turns he is eliminated.

Takeover

A player may be taken over either if he cannot pay his debts or if he is already in Chapter 11. The purchaser pays the purchased player's debts. If there is a takeover battle, the aspiring purchasers must bid against each other, and the highest bidder pays his bid to the bank.

The purchaser and subsidiary then play, in effect, as a team, though the purchaser is in charge. He gets to choose the beneficiaries and victims of the risk cards his subsidiary picks and may use the subsidiary's assets to pay his fines, or pay the subsidiary's fines if he wishes. But he does not have to: if his subsidiary gets into debt again, he can let the subsidiary go into Chapter 11. The subsidiary is then a free agent once more, and may get out of Chapter 11 in the usual ways. But the player who has just abandoned him may not take him over during that stay in Chapter 11, although he may during a subsequent visit.



Printing money

The Bank of Econia supplies the currency for this game. To access the banks vaults, download and print the money using the currency pdfs. Money may be printed in colour or grayscale.

The econo is available in five notes: Ec 10 million (here), Ec 50 million (here), Ec 100 million (here), Ec 500 million (here) and Ec 1000 million (here). There is a pdf page for each denomination with 10 bills on each page.

The Bank encourages a print run of:

60 x Ec 10m (6 pages with 10 bills on each page)

60 x Ec 50m (6 pages with 10 bills on each page)

60 x Ec 100m (6 pages with 10 bills on each page)

20 x Ec 500m (2 pages with 10 bills on each page)

20 x Ec 1000m (2 pages with 10 bills on each page)

Use scissors to separate notes.

Printing "Financial Risk" cards

There are 30 "Financial Risk" cards contained in three pdfs (here, here and here). Print one copy of each pdf and use scissors to separate cards. Place separated cards in a pile face down during play.

Printing icons

Players may choose any item to represent them on the board. Optional icons are contained on an icon pdf (here). Print page and separate desired icons using scissors. Fold back base flaps in order to allow the icon to stand upright.

Printing game board

The game board is available for printing on two pdfs (here and here) with one half of the board on each file.

Enlarging the board is encouraged. This may require utilising larger paper or printing then assembling the board from several pages.



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Chilies

Global warming

Dec 18th 2008
From The Economist print edition

Why the world has taken to chilies

Why the world has taken to chilies

AP



TASTELESS, colourless, odourless and painful, pure capsaicin is a curious substance. It does no lasting damage, but the body's natural response to even a modest dose (such as that found in a chili pepper) is self-defence: sweat pours, the pulse quickens, the tongue flinches, tears may roll. But then something else kicks in: pain relief. The bloodstream floods with endorphins—the closest thing to morphine that the body produces. The result is a high. And the more capsaicin you ingest, the bigger and better it gets.

Which is why the diet in the rich world is heating up. Hot chilies, once the preserve of aficionados with exotic tastes for cuisine from places such as India, Thailand or Mexico, are now a staple ingredient in everything from ready meals to cocktails.

One reason is that globalisation has raised the rich world's tolerance to capsaicin. What may seem unbearably hot to those reared on the bland diets of Europe or the Anglosphere half a century ago is just a pleasantly spicy dish to their children and grandchildren, whose student years were spent scoffing cheap curries or nacho chips with salsa. Recipes in the past used to call for a cautious pinch of cayenne pepper. For today's guzzlers, even standard-strength Tabasco sauce, the world's best-selling chili-based condiment, may be too mild. The Louisiana-based firm now produces an extra-hot version, based on habanero peppers, the fieriest of the commonly-consumed chilies.

But for the real "heat geeks", even that is too tame. Tesco, Britain's biggest supermarket chain, recently added a new pepper to its vegetable shelves: the Dorset naga. Inhaling its vapour makes your nose tingle. Touching it is painful; cooks are advised to wear gloves. It is the only food product that Tesco will not sell to children. By the standards of other chilies, it is astronomically hot. On the commonly used Scoville scale (based on dilution in sugar syrup to the point that the capsaicin becomes no longer noticeable to the taster) it rates 1.6m units, close to the 2m score of pepper spray used in riot control.

The pepper that previously counted as the world's hottest, the Bhut Jolokia grown by the Chile Pepper Institute at the New Mexico State University, scored just over 1m. That in turn displaced a chili grown by the Indian Defence Research Laboratory in Tezpur, which scored a mere 855,000. The hottest habanero chilies score a wimpy 577,000.

The naga, originally from Bangladesh, was developed commercially by Michael Michaud, who runs a specialist online chili supply firm in south-western Britain. Having spotted it in an ethnic-food shop in the coastal town of Bournemouth, he bred a dependable and much hotter strain and had it tested. "I sent the powder to a couple of labs. They didn't believe the reading. They thought they had made a mistake," he recalls. Jonathan Corbett, the buyer who handles (cautiously) specialist chilies for Tesco says that the naga makes a standard hot curry "taste like a bowl of breakfast cereal".

The naga has been a runaway success. In 2007, a Tesco outlet in Newcastle in northern England was supplied with 400 packs for a pilot period that was intended to last a month. The entire stock sold out on the first morning. According to AC Nielsen, a market-research firm, demand for hot chilies across all British retailers rose by 18% in the last year. At Tesco, the growth has been 29%. Demand for the naga has been so high that it has been forced to sell unripe green ones, intended for sale early next year. Tesco's supplier is Britain's biggest chili farmer, Filippo Salvatore. Based near Biggleswade, he is also a leading light in the Bedford Sicilian Association. He is hurrying to grow more.

Tesco is one of the world's largest retailers, with outlets in both continental Europe and North America. But Mr Corbett says that his colleagues have no plans to stock the naga elsewhere, for example in the firm's Fresh & Easy chain in America. "Tastes in the UK are hotter," he says. That may be true, though the chili-eating milieu is certainly bigger in America, where the calendar is dotted with events such as the rumbustious Fiery Foods and Barbeque Show (in Albuquerque) and the more academic 19th International Pepper Conference (which took place in September in Atlantic City, concluding with a barbecue).

AP



From pain comes pleasure

For connoisseurs though, the macho hullabaloo about ever-hotter chilies is distasteful, even vulgar: rather like rating wine only according to its alcohol content. Steve Waters, who runs the South Devon Chili Farm, says even the idea that the spectrum runs on a simple one-dimensional axis between "hot" and "mild" is misleading. He prefers the more complex Mexican matrix, which categorises chilies both by heat, and whether they are fresh, dried, pickled, or smoked. Any of these can produce big changes in flavour: he highlights the Aji (pronounced ah-hee), a Peruvian chili, which "ripens to bright yellow, with a strong lemony taste when fresh, very zesty. When dried it picks up a banana flavour."

From this point of view, the most interesting trend is not in ever-higher doses of capsaicin for the maniac market, but in the presence of chili in a range of foodstuffs that previous generations would have regarded as preposterous candidates for hotting up. Chili-flavoured chocolate, for example, has gone from being a novelty item to a popular mainstream product. Mr Waters sells "hot apple chili jelly" as a condiment for meat, and chili-infused olive oil.

Adrenalin plus natural opiates form an unbeatable combination

The reason may be that capsaicin excites the trigeminal nerve, increasing the body's receptiveness to the flavour of other foods. That is not just good news for gourmets. It is a useful feature in poor countries where the diet might otherwise be unbearably bland and stodgy. In a study in 1992 by the CSIRO's Sensory Research Centre, scientists looked at the effect of capsaicin on the response to solutions containing either sugar or salt. The sample was 35 people who all ate spicy food regularly but not exclusively. Even a small quantity of

capsaicin increased the perceived intensity of the solutions ingested. Among other things, that may give a scientific explanation for the habit, not formally researched, of snorting the "pink fix" (a mixture of cocaine and chili powder).

A chili-eating habit may develop to a startling degree (your author guzzled a packet of nagas while writing this article, and puts Tabasco in his coffee). But indulging in capsaicin does not quite meet the formal medical definitions of addiction. It is at most a craving, not a physical necessity. It does not cause loss of control when taken to excess, or illness in those deprived of it: heavy users may develop remarkable degrees of tolerance, but they do not require regular doses simply in order to feel normal. The preference does not wear off: ex-smokers, by contrast, may gag at the taste of a cigarette. And the effect on the brain is different: with nicotine, the more you smoke, the more you want.

Indeed, capsaicin has useful medical effects. By disabling a part of the nervous system called "transient receptor potential vanilloid 1" it can stop the body registering the pain caused by rheumatoid arthritis, for example. It can also be used to help patients with multiple sclerosis, amputees, and people undergoing chemotherapy. With rather less scientific evidence, a capsaicin product is marketed as an alternative to Botox, a wrinkle-smoothing cosmetic treatment.

But does it do any harm? The use of pepper spray as a weapon, and chili powder as a means of torture, suggests that it must. Certainly capsaicin can be painful, causing stress: in itself a potential health risk. A big dose incapacitates. But as far as permanent physical damage is concerned, the evidence is negligible to non-existent.

That seems to contradict common sense, which suggests that hot food causes an upset stomach—or what medical specialists call "gastric mucosal injury". A study in 1987 on the effects of ordinary pepper produced some signs of gastric exfoliation (stripping away the stomach lining) and some bleeding—though the effects were less than those produced by aspirin. An alarming-sounding experiment a year later involved volunteers being fed minced jalapeño peppers through a tube, directly into the stomach. The results, observed by an endoscope (a camera on a tube) revealed no damage to the mucous membrane. Against that is a study of heavy chili-eaters in Mexico City, who appeared to have higher stomach cancer rates than a control group. But the rate of illness had no correlation with the frequency of chilies eaten, leading to speculation that other factors may be at work.

Humans are the only mammals to eat chilies. Other species apparently reckon that nasty tastes are a powerful evolutionary signal that something may be poisonous. Paul Rosin, a psychology professor at the University of Pennsylvania, who is one of the world's best-known authorities on the effects of capsaicin, has had no success in persuading rats to eat chilies, and very limited success with dogs and chimpanzees: the handful of cases where these animals did eat chilies seemed to be because of their strong relationships with human handlers.

That offers a clue to the way in which mankind comes to develop a chili habit. In the same way as young people may come to like alcohol, tobacco and coffee (all of which initially taste nasty, but deliver a pleasurable chemical kick), chili-eating normally starts off as a social habit, bolstered by what Mr Rozin calls "benign masochism": doing something painful and seemingly dangerous, in the knowledge that it won't do any permanent harm. The adrenalin kick plus the natural opiates form an unbeatable combination for thrill-seekers. Just don't get it in your eyes.

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Sufism

Of saints and sinners

Dec 18th 2008 | DELHI, LAHORE AND SEHWAN SHARIF
From The Economist print edition

The Islam of the Taliban is far removed from the popular Sufism practised by most South Asian Muslims

Declan Walsh



"NORMALLY, we cannot know God," says Rizwan Qadeer, a neat and amiable inhabitant of Lahore, Western-dressed and American-educated, eyes shining behind his spectacles. "But our saints, they have that knowledge."

Mr Qadeer is standing in the belly of a shrine that he is building to a modern gnostic, Hafiz Iqbal, whom he venerates especially. Cool, and smelling pleasantly of damp earth and mortar, it holds Iqbal's grave, covered by an embroidered green shroud and sprinkled with pink rose petals. A young man—a Pakistani resident of London, Mr Qadeer says—stands in silent prayer to the saint, who was employed by Lahore's municipal government as a street-sweeper, and died in 2001. In a tradition of popular Sufism, which mingles classical Islamic mysticism with Hinduism and folk beliefs and is a dominant feature of Islam in South Asia, the saint's divine essence, or *baraka*, emanates from his tomb. "Physically, our holy saints do die," says Mr Qadeer. "But the spirit is still here, because they have reached eternity."

Echoing down a winding stairwell, a scraping of masonry and clink of chisel on marble signal a remarkable monument rising. It is in the scruffy Lahori suburb of Baghbanpura, where Iqbal lived for six decades. From a narrow alley running alongside the shrine, it is mostly hidden: its high outer walls, of recessed brickwork speckled with multicoloured tiles, rising out of sight to a pair of domes and skinny minarets. A few steep steps lead into a small cloistered forecourt, where masons are at work.

Either side of the forecourt, about ten metres apart, are two false burial chambers. These are beautifully decorated, with white marble lattice and marble mosaics studded with green jade, lapis lazuli and agate. One is for Iqbal and the other for his mentor, a mystic called Baba Hassan Din, who lived in a brick cell on this site and died in 1968. The men's true graves lie underneath, in brick-walled chambers, faintly murmuring with the sounds of the street outside.

According to Mr Qadeer—who had it from Iqbal—Din was, unbeknown to many of his disciples, an Englishman from Birmingham who, early in the last century, abandoned his family and his job on the railways to become a Sufi ascetic. His real name was Alfred, or possibly Albert, Victor. He received his vocation one fine summer evening, in a visitation from Abu Hassan Ali Hujwiri, an 11th-century Persian saint, who is better known as Data Ganj Bakhsh.

In the 1950s, according to Mr Qadeer, Din arrived in Lahore, and passed himself off as a Punjabi. He also adopted a poor local boy, Iqbal, and raised him to be a scholar. According to Mr Qadeer, Iqbal earned several degrees from Government College University, Lahore—one of Pakistan's finest. But in the early 1960s he embarked on his own spiritual training: taking a job as a sweeper, under an assumed Christian identity. He could not have sunk lower. In the Hindu caste system, which is still discernible in Muslim Pakistan, many generations after its inhabitants converted from Hinduism, street-sweeping is a profession for "untouchables". Most Christians in Pakistan and India were originally members of that despised Hindu group.

Mr Qadeer, a well-to-do, secular Pakistani, who studied engineering at the University of Houston, became a follower of Iqbal in 1990. He was referred to him in a state of anguish, which he credits the saint, an irascible chain-smoker, with ending. He also believes Iqbal cured his young daughter of a rare intestinal ailment. Other disciples of Iqbal attribute miracles to him, including curing cancer. They say he was omniscient. They believe that, as the height of Sufi attainment, Iqbal knew God.

The stringent, legalistic creeds of the Taliban and other revivalists are on the rise in South Asia, but only a minority follow them. Most of the 450m Muslims in Pakistan, India and Bangladesh—nearly a third of the Islamic world—practise a gentler, more tolerant faith, in which pre-Islamic superstitions are still evident. It is strongly influenced by Sufism, an esoteric and, in theory, nonsectarian Muslim tradition, which is strictly followed by a much smaller number of disciplined initiates. In its popular form, Sufism is expressed mainly through the veneration of saints, including self-styled mystics like those in Lahore, canonised by their followers.

South Asia is littered with the tombs of those saints. They include great medieval monuments, like the 13th-century shrine of Khwaja Moinuddin Chisti, founder of South Asia's pre-eminent Sufi order, in Ajmer. But for every famous grave, there are thousands of roadside shrines, jutting into Delhi's streets, or sprinkled across the craggy deserts of southern Pakistan. On a single hillside in Pakistan's province of Punjab, outside the town of Thatta, legend has it that 125,000 Muslim saints are buried.

Pakistan's southernmost state of Sindh, a vast desert bisected by the Indus river, is perhaps best known for its shrines. A few miles outside the city of Hyderabad, in sight of the Indus, a middle-aged dwarf called Subhan manages one of them. She found the shrine deserted a few years ago, and moved into it. It is a small shack, with a low doorway hung with cowbells, in the tradition of a Hindu temple. A dusty green shroud covers the grave. Incense burns at its foot. Subhan says it holds the dust of a medieval saint called Haji Pir Marad. Sometimes, she says, he wrestles with the Indus to prevent it from changing course. In fits of terrible rage, he has caused pileups on the road. She advises passing motorists to propitiate the saint with a modest gift of rupees. On a good day, she collects around 50 rupees (60 cents) from the travellers who stop to pray.

All the traffic, on that recent sunny day, was bound for the nearby town of Sehwan Sharif, where Lal Shahbaz Qalandar, one of Pakistan's most prominent Sufi saints, is entombed. It was the 734th anniversary of his death, an event marked by an annual festival attended by several hundred thousand devotees. This event is known as Qalandar's *urs*, or wedding-night, to signify his union with God. A three-day orgy of music, dancing and intoxication, literally and spiritually, the *urs* at Sehwan is one of the best parties in Pakistan, or anywhere.

Outside Qalandar's shrine, a white marble monument, decorated with flashing neon, pilgrims work themselves into an all-night ecstasy. Tossing their long black hair, a dozen prostitutes from Karachi or Lahore have a place reserved by the shrine's golden doorway, to dance a furious jig. It is the *dhammal*, a rhythmic skipping from foot to foot, for which Qalandar's followers are well-known. Thousands are moshing to a heavy drumbeat. The air is hot and wet with their sweat. A scent of rose petals and hashish sweetens it. In a flash of gold, out in the crush, a troupe of bandsmen in braided Sergeant Pepper uniforms are blowing inaudibly into brass instruments, then lifting trumpets and trombones into the air as they dance the *dhammal*.

Fighting through the crowd, a stream of peasant pilgrims flows into the shrine. Many carry glittering shrouds, lovingly embroidered by a wife or mother, as an offering for the tomb. They will be bestowed with a poor man's prayer, for a good harvest, debt relief, or a son. "Last year I told my master [Qalandar] that I would bring him a goat if he gave me a son. I have come to honour that promise," said Muhammad Riaz Rahman, a shopkeeper from Multan, tugging a calm-looking billy, daubed with pink dye, through the crowd.

To orthodox Sufis, all this is absurd. Islam's mystical strain, like the Jewish and Christian traditions it somewhat resembles, is a strictly delineated path to self-knowledge. The proper Sufi seeks to attain this

state through rigorous disciplines, of which *dhikr*, the remembrance of God, by reciting or meditating on his name, is the most common. Through self-knowledge, the devout mystic strives to attain knowledge of God Himself. This sets Sufis apart from Islam's other functionaries, its jurists, or mullahs, and its theologians.

Throughout Islamic history, Sufis and mullahs, dedicated to enforcing Koranic laws, have clashed. Mullahs demand obedience; Sufis tend to stress tolerance. In their poetry, which mullahs shudder to read, Sufis often represent the state of rapture that they seek in the language of physical love or drunkenness. "I have no concern but carousing and rapture," wrote Rumi, Sufism's greatest poet, whose followers, of the Turkey-based Mawlawi order, remember him in a whirling dance, the *saga*, which has become synonymous in the West with all Sufism.

Alixandra Fassina



Building Baba Hassan Din's shrine

Yet—despite what the hordes at Sehwan may believe—orthodox Sufis are also law-abiding Muslims. There should be no contradiction between these two positions. "Sufism is Islam and Islam is Sufism," says Khwaja Hasan Thani Nizami, the hereditary keeper of the shrine of Nizamuddin Auliya in Delhi. In orthodox Islam, for example, the limits of sainthood are strictly prescribed. Dead Muslim saints cannot intercede with God or perform miracles. If Muslims pray at their shrines, it can only be for the dead man's salvation. They may not pray to him, which would be *shirk*, a form of idolatry. According to Ahmed Javed, a bearded Pakistani Sufi and scholar: "You can't ask a dead saint to mediate, to solve a problem, to fulfil a wish, never, never, never. That is *shirk* in law and in Sufism."

But South Asians never have been terribly law-abiding. Nor, during the centuries-old process of Islamisation that they led, have the Sufi orders always insisted that they should be. This really began in the 13th century, soon after the conquest of Delhi by an army of Persian-speaking Afghans. A powerful Sufi order, the Chistis, proceeded to spread across north India, led by Chisti, the great mystic buried in Ajmer.

Chisti's initiates wore motley, practised poverty, neglected their families and despised the Muslim sultans and emperors who would rule India for five centuries. In the words of a famous Chisti couplet: "Why must you enter the doors of emirs and sultans? You are walking in the steps of Satan!" The Chistis were known for their love of poetry and, especially, music. Pilgrim-poets still gather in the shrine of Nizamuddin Auliya, another great Chisti saint and poet, in Delhi, wearing the yellow pixie-hats of the order's initiates.

Under Chisti influence, low-caste Hindus converted to Islam, to escape their low birth. Women, who are everywhere prominent in Sufism, were also especially welcomed. Perhaps most remarkably, the Chistis accepted recalcitrant non-Muslims as Sufi initiates. This set the tone for an astonishingly harmonious cohabitation between Hindus and Muslims in South Asia which continues, though it is sorely tested, to this

day.

In the shrine of Shah Abdul Latif Bhitai, a great poet of Sindh, musicians gather to sing hymns. As their voices rise, in the blue-tiled portico of the shrine, a line of brightly clad Hindu women traipse in from the Sindhi desert which, for nomads like them, is still an open border to India. The Pakistani Muslim crowd, seated cross-legged on the forecourt, stirs to give them room. The women pass through, to give obeisance to Bhitai's tomb. It is a moving scene.

For its message of tolerance, Sufism has long been fashionable outside the Muslim world. Outside Philadelphia, amid rolling green hills, is the shrine of Muhammad Raheem Bawa Muhaiyaddeen, a Sri Lankan Sufi saint, who died in America in 1986. In recent times, moreover, Western interest in Islamic mysticism has become urgent. Some American commentators see Sufis as potential allies in a hostile Muslim world. A report by RAND Corporation, an American think-tank, recommended bolstering Sufism, as an "open, intellectual interpretation of Islam".

On the face of it, this makes sense. In north-western Pakistan, where the Taliban rule, the Pushtuns have often taken against Sufi saints. According to the 1911 Census of British India, the Afridi tribe, having no shrine to worship at, "induced by generous offers a saint of the most notorious piety to take up his abode among them." They then slit his throat, buried his corpse, and built a splendid shrine over it. These days, alas, they would probably not build the shrine: the Taliban tend to consider Sufism idolatrous. They are in the same puritan camp as Saudi Arabia's unforgiving Wahhabi sect, their sometime sponsors. In the land of Muhammad, whom mystics revere as the first Sufi, the Wahhabis have bulldozed many old shrines.

At Qalandar's shrine in Sehwan, a pilgrim called Tanvir Ahmed describes spending four months among the Taliban last year, in Swat, a Taliban fief near the Afghan frontier. He had thought to join the militants. But he was put off by their injunctions against Sufi saints. To a murmur of approval from other devotees, gathering thickly around us, Mr Ahmed says: "No one can deny our respected saints of God."

But the *urs* also presents troubling scenes. As dusk falls, and the crowd dancing the *dhammal* outside the shrine swells, so does an army of men and boys, stripped to the waist. Legs akimbo, they sing a funeral dirge to the Shia martyr Hussain. It describes the battle of Karbala, in which Hussain fell, and Sunni and Shia Muslims were so painfully divided. As their deep voices rise, so the men's arms lift together. Then each hand slaps down, with a thwack, on its owner's red and glistening chest.

Alixandra Fassina



Hashish helps a mystic along the path to enlightenment

In daylight, inside the shrine, an even more strikingly sectarian ritual takes place. Shia pilgrims flagellate themselves with chains dangling with knife-blades and cry out to Ali, father of the martyred Hussain, and revered in Shia Islam. As they open their backs, sending blood onto the shrine's floor, other pilgrims recoil. Many appear disgusted. In theory, Sufism transcends Islamic sects. For example, Qalandar was a Shia; many—or most—of his devotees are Sunni. Yet the shrines of Sindh, where many Shia Muslims live, are increasingly seeing strident sectarian displays. This may be partly a reaction to the attacks Pakistani Shias increasingly face from fundamentalists like the Taliban. It is a sign of popular Sufism under duress.

Sufi scholars, in Karachi, Delhi and Lahore, are concerned by this. But none wants government help—least of all from a reviled Western government. Many also note that Sufism is not, as Westerners seem to think, uniform. The conservative Naqshbandis, followers of another of South Asia's main orders, have helped spread *jihad*: there was a Naqshbandi insurgent group in Iraq.

Qalandar, one of Pakistan's most prominent Sufi saints, was not really of any order. He exists in a tradition of eccentric, mendicant Sufis. He was strongly influenced by Hinduism; many Hindus consider him a manifestation of Shiva. A Hindu performs the opening ritual of the annual *urs*. During the festival many devotees bring clay dishes of henna to Qalandar's tomb, as to a Hindu bride on her wedding-night, and spread it on themselves, invoking the name of a Hindu water-god.

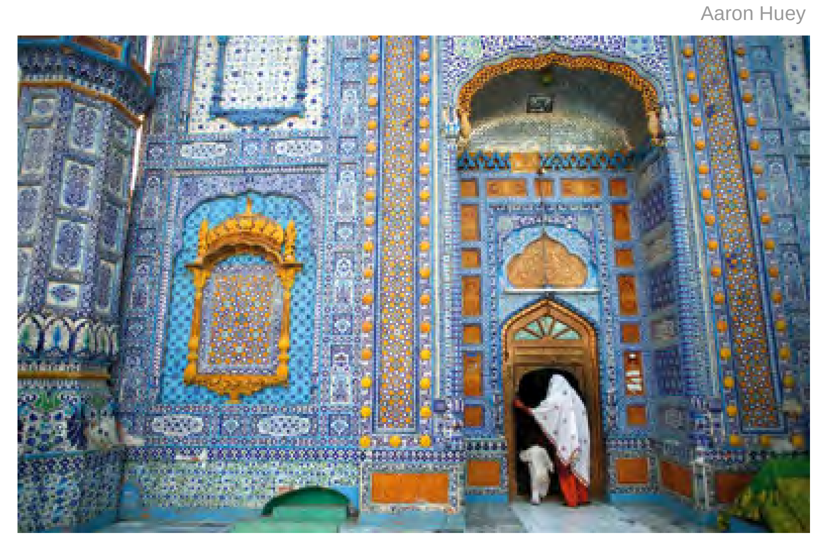
Amid syncretism, heresy thrives. Outside Qalandar's mausoleum, just before dusk, a tall bearded man, wrapped in a black cloak and carrying a silver club, shouts into a loud-hailer: "Ali Allah! Allah Ali!"—"Ali is God! God is Ali!" He is Sayeed Ghafur Ali, a fine-looking dervish, and leader of a sect in Karachi which propagates this fearful blasphemy. In many Muslim places it would cost Mr Ali his head. But in Sehwan no one seems to mind. Asked, in a calmer setting, whether he has been a dervish for long, Mr Ali smiles and removes two tightly-bound parcels, about the size of American footballs, from his trouser pockets. They contain his hair, which grows in thick tresses under his cloak. Mr Ali says he has not visited a barber since he dedicated himself to Qalandar.

Unlike most renowned Sufi saints, Qalandar left little literature. In academic histories, his name hardly appears. To plug the gap, his devotees attribute miracles to him. One tells how Qalandar reconstituted a Hindu disciple, Bodhla Bahar, after an evil raja had made mincemeat of him. The narrator of this story may appear to have been smoking drugs. For Qalandar's black-clad *fakirs*, many of whom are full time vagrants, much like Hinduism's dread-locked *saddhus*, the *urs* is a wonderful opportunity to eat, dance and get stoned among friends. "Though I only smoke in the mornings to strengthen the body," cautions Emir Bux, an elderly itinerant inside the shrine, with an orange hennaed beard and a headdress of curvy wooden snakes.

Sex is also to be had at the *urs*, but less freely. Sufi shrines have always appealed to prostitutes. This is partly because of the Sufis' tolerance of sinners, but also because they make good places to sin. At Sehwan, which has a name for licentiousness, a transsexual prostitute—or *hijra*—called Ghazala says she came from Lahore, with 15 of her eunuch sisters, to pray and dance. Smoking a cigarette down to its filter, Ghazala, a muscular figure with greying temples, claims: "We came here only to worship our saint." That is an unlikely story.

Presiding over this riot, from a grand house beside the shrine, is Mehdi Shah, a doctor from Islamabad, who recently inherited the title of *sajjada nishin*, or keeper of the shrine. This is an important office in Pakistan. The wardens of its most important shrines, including some, known as *pirs*, who claim descent from important saints, are among the country's biggest landowners. This is partly a legacy of their usefulness to two former invaders of South Asia, the Mughals and British, both of whom patronised the shrine-keepers. Since the early 1960s, Pakistani governments have been taking over the most lucrative shrines, including Qalandar's. But Pakistan's *pirs* are still formidable. By one estimate, *pir* politicians command 10% of the popular vote. The current prime minister, Yusuf Raza Gilani, and foreign minister, Shah Mahmud Qureshi, are both *pirs*.

Aaron Huey



A colourful version of Islam

Like so much else in Sehwan Sharif, this tradition has got messy. Mr Shah, the keeper of the shrine, is candid about the responsibilities *pir*-dom confers: "To guide people and make money." But he regrets the competition for the office this has engendered. In Sehwan Sharif, several dozen local families claim to be guardians of the shrine. "There may be a thousand Tom, Dick and Harrys claiming to be *sajjada nishin*,"

grumbles Mr Shah.

In a small room next to the shrine, decorated with peacock feathers, one of these wannabes, Paryal Shah, has set up shop. As Mr Shah, a bearded man rattling with amulets, enters the room, pilgrims hurl themselves at his feet. Grunting, occasionally slapping a pilgrim who crushes his toes, Mr Shah dispenses blessings among them. "God will help you," he growls, doling out white cotton threads, blessed in advance, or a scrap of paper scribbled with a Koranic verse. It is hard to know how seriously anyone takes this charade. Mr Shah's English-speaking right-hand, Ahmed Bhutto, winks and says that he and Mr Shah's other disciples practice strict chastity: "I only do it with my wife!"

A more troublesome rival to Mehdi Shah is his uncle, Mozafir Ali Shah. They are locked in a property dispute so ugly that Mehdi Shah refuses even to visit his uncle's house for a traditional family celebration: a dance performance by a visiting troupe of prostitutes. To the uninitiated, this splendid occasion is not obviously religious. The men of Mozafir Ali's house sit in proud silence, as prostitutes straddle its courtyard, thrashing their long hair and kissing these hereditary notables' knees. The women of the house rain rupee notes down on the dancers from a balcony discreetly above. A drummer shouts: "Sakhi Shahbaz Qalandar duma dum mast!"

True Sufis are embarrassed by such scenes. At Delhi's great Sufi shrine, Mr Nizami, the keeper, says a Sufi must have three qualities: knowledge of Islam; love of God; and sanity. Whatever else they lack, he scoffs, the devotees of Qalandar are insane: "there is no Sufi among them!" Mr Javed, the Sufi in Lahore, agrees. But he contrasts such harmless superstition, as he terms popular Sufi beliefs, with the ruthless literalism of the Taliban. He says: "I feel safe among shallow-minded occultists. I do not feel safe among literalists."

Scholars like these are Sufism's true keepers. But in the undergrowth of popular Sufism, it is remarkable how little of their prescriptions survive. It has always been so. The diversity of South Asian Islam is a staggering multicultural achievement. If its mystics, orthodox and popular, are now increasingly besieged by mullahs, fellows of the Taliban, the massive gatherings at Sehwan and other Pakistani shrines suggest they will not be overrun soon.

Moreover, South Asia's popular Sufism is not all degenerate. Some of South Asia's greatest artistic achievements, especially in architecture, are expressions of it. The shrine to Baba Hassan Din rising in Lahore is among them.

Mr Qadeer and Mr Niaz, the disciples of Hafiz Iqbal, began work on it a few months after his death. It is being constructed entirely in natural materials, including clay bricks, white marble, gemstones, and lime plaster strengthened, as luck would have it, by the thousands of frogs that perished in it. The craftsmen building the shrine use traditional tools and techniques, some revived especially for the task.

Unsupported by concrete, the shrine's domes rest on the weight of their own artful construction. Its cloisters are modelled on the shrine of Imam Ali in Najaf. Its bejewelled mosaics are copied from the walls of Delhi's 17th-century Red Fort. On the walls of the false burial chambers, Koranic verses, chosen by Hafiz Iqbal, have been inscribed in an ink made from burned mustard oil, in a style of calligraphy taken from the Taj Mahal. It is a wonderful creation. Kamil Khan Mumtaz, the architect, a Sufi initiate himself, believes there has been no Islamic monument built like it, anywhere in the Muslim world, for 300 years. May it last longer.

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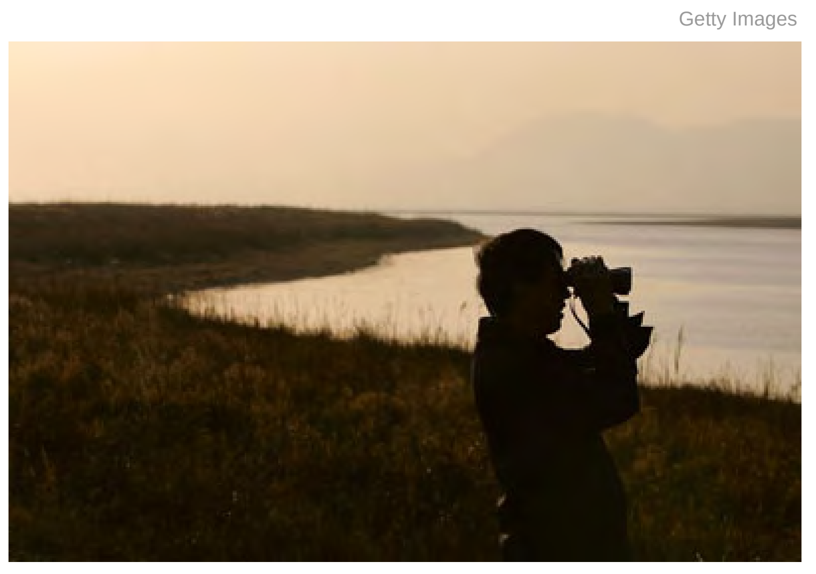
Birds in China

The loneliness of the Chinese birdwatcher

Dec 18th 2008 | ZHOUSHAN
From The Economist print edition

A personal account of an exhilarating hunt for the Chinese crested tern, possibly the world's rarest bird

Getty Images



The fields are few, but the sea is vast. So men have made fields from the sea.
—Qing dynasty gazetteer

THEY are there as night falls, and your car lights pick them up as you speed along the coast on a new and excitingly empty motorway: clusters of ragged people who have clambered up through the barriers from the patchwork of ancient paddy fields which this new road paved with glorious intentions has sundered. This is Hainan, an island nearly the size of Sri Lanka which for centuries the Chinese considered to be a place of exile and disease but which the Communist state and its construction mafia is rebranding as a tropical paradise. The people are not ethnic Chinese at all, but from the Li minority—the original settlers of Hainan.

The early Chinese conquerors called them barbarians, for they drilled their teeth and went barefoot; a poet, despising their sharp voices, dubbed them shrike-tongued. Today the Chinese still look down on the Li but esteem them as hunters. "Bow and knife never leave their hands," wrote a Song dynasty chronicler; or mist nets, a modern chronicler might add. By the side of the road, Li men, young and old, hold clusters of wild birds by the legs, waving them as we roar past. We skid to a halt and I get out for a closer look.

The Li men jostle to sell me supper, all of it live: white-breasted waterhens, little egrets, a black-crowned night heron and a spot-billed duck, the only duck where male and female look alike. Upright, herons and their egret cousins have the gaunt, hunched air of sharp-eyed spinsters dressed for an Edwardian salon. Hung upside down, they turn limp, resigned to their fate except for the occasional mild jab at their captor's hand. I have not eaten of the family. But I did once (in a Guangzhou restaurant that kept herons, civet cats and a live donkey in the store room) accept a bite of cormorant, which must be similar, and it is nothing to write home about. As I turn back to the shiny car, one of the old vendors in a torn T-shirt and shorts is disdainful. "*Ta kan ye bu mai*!" he spits. "He looks and doesn't even buy anything."

China is not a good place to be a bird. I learnt this when I moved from Hong Kong, still a British colony, to Beijing. Though my home in Hong Kong was in the heart of the city, dense scrub tumbled down the slopes from the Peak. I was driven out of bed every morning by a raucous dawn chorus. The violet whistling thrush was among the first to start up, and the *hwamei* ("beautiful eyebrow"), with white eyestripe and rich territorial song. The koel, a tropical cuckoo that lurks in thick cover, has a rising bisyllabic wolf-whistle. The grey treepie, a corvid, was a late riser, but hoodlum gangs soon made up for it. Layered over

the top of all this came the screeches of sulphur-crested cockatoos. These aerial zoomers were a feral flock. The oldest had short lengths of chain on their legs and were released in 1941 from the aviary at Flagstaff House as the Japanese army closed in.

In my *hutong* neighbourhood in Beijing, by contrast, the mornings were strangely silent. In 1958 Mao Zedong had declared war on songbirds, sparrows in particular: he claimed they consumed scarce grain. For three days and nights my neighbourhood, gripped like much of northern China by hysteria, had beaten pots and pans to keep birds on the move until they collapsed in exhaustion on the roofs and pavements of the courtyard houses. The consequence was a plague of locusts the next year that helped bring on a famine. "*Suan le*," Mao had said when told that the anti-sparrow campaign was not working. "Forget it then."

Four decades after the campaign, sparrows remained scarcer in Beijing than they should have been (though they could reliably be found being grilled on bamboo skewers in the night markets, along with yellow-breasted buntings, meltingly sweet, in autumn). The most common bird-sound I used to hear was the clack of a handsome azure-winged magpie as it rummaged through my crab-apple tree. The occasional croak drifted down from on high as a raven returned to the Temple of Heaven. But the most memorable, and haunting, bird-sound was man-made. An old monk in a temple down my lane had inserted tiny bamboo flutes into the tail-feathers of his flock of pigeons. As they wheeled over my roof, they trailed an aeolian music behind them. The old man is gone now. So, too, are the courtyard houses and the *hutong* neighbourhoods, flattened in an orgy of destruction that was supposed to make Beijing more presentable for the Olympics.

In theory, China has lots of birds. To date, 1,329 species have been counted, out of a world total of 9,000-odd. China has a rich mix of habitats, from upland steppe and desert, to mountain fir and spruce forests, lowland tropical rainforest, and wetlands. China is the world centre for pheasants, boasting 62 out of 200 species worldwide: the tail feathers of the Reeve's pheasant, 60 inches (150cm) long, are prized for headgear in Peking opera. The country has nine of 14 species of crane, a bird held in special affection for its fidelity; and a quarter of the world's total of ducks, swans and geese. Many bird species are endemic (that is, found nowhere else), and China's south-west is particularly rich in flora and fauna, birds included. Hainan, despite heavy logging, boasts two species unique to the island: a partridge, and a leaf warbler discovered only in 1992.

Spotting birds in thick forest is a tantalising business and, for a reporter with dull senses, it tips towards the frustrating. In Hainan's high forest reserve of Bawangling, a nondescript bird (a common white-eye, or a bird unknown to science?) flits into view for a split second; before I have fumbled with the focusing knob on my binoculars, it has vanished back into the gloom. The reserve's species list is long, but mine is grimly short, though I did see a magnificent male silver pheasant, 40 inches from bill to tail, crossing the forest track. And I heard a troupe of that rarest of mammals, the Hainan black-crested gibbon, hooting away high up along the mountain ridges. Yet my passions lie with the open coast: the intertidal flats, the salt marshes and the mangrove swamps that every autumn, winter and spring host (when you can find them) intoxicating numbers of shorebirds, waders and wildfowl driven down by instinctual urge from their breeding grounds in Asia's far north.

In search of shorebirds, I cross by crowded ferry from Hainan to Beihai, mainland China's southernmost port near the border with Vietnam. Aboard, a large box of passerines and mynah birds, heading for death in exquisite cages, keeps up a cheerful chorus while the rest of the passengers succumb to a dumb seasickness.

China's coast is long and indented. It abuts relatively shallow seas, rendered turbid by the sediment of China's east-flowing rivers—1 billion tonnes of sediment a year dumped by the Yangzi and Yellow rivers alone. Hainan and Taiwan farther north provide something of an outer boundary for the South China Sea and East China Sea respectively—comparisons are often made between these semi-enclosed seas and the Mediterranean. The warm monsoonal waters are rich spawning grounds for fish and other marine species. But even more than the Mediterranean littoral, China's is a busy coast. That is a problem for a great diversity of wild things trying to thrive alongside humans.



Beihai sits in a tight-lipped bay on the Gulf of Tonkin, where the rich silt of estuaries is swept and trapped by turbid currents—a paradise for molluscs and those that hunt them. Winter dawn is leaden, no line between sky and sea. A flotilla of low craft chuff from left to right, man and wife hunched at the stern. One by one, the boats break off to settle by withies that mark the pearl-oyster beds. On each deck is a wooden shed and all the paraphernalia of oyster cultivation: tongs and rakes, mesh-bags of oyster spat, wire trays. Within minutes the scattered boats lay still, and the seascape takes on an air of quiet industry, a watery allotment land.

On shore, clams and cockles sit in heaps before a long brick row of low fisherman's homes, the doorposts pasted with bright paper charms. Out front, families are ankle-deep in bivalves, shovelling them into soybean sacks and stacking these in piles. The haul, says a woman with a grin, is on its way to the tables of Beijing.

This sea-harvest crawls up the pavements and covers the slopes of the town. On a hill, a former glassworks with a high redbrick chimney is now home to foreshore families who have moved in to squat. With the screech of packing tape run off the reel, polystyrene boxes of shellfish are sealed and piled high on to the back of motorised rickshaws. Inside the buildings, not a soul. The light from the high windows is dappled, as if in a church, and the padded silence is broken only by a gentle bubbling. All around, low pools are filled with clear water, salty to the taste. Here lie molluscs in their thousands, half-burrowed in

the sand: whelks and winkles, turbans, clams and cockles, their patterned shells matching the mottled light. Most have put out snout-like siphons to feed, or rather to purge what impurities they had ingested in their adolescence on the city's tideflats.

Along the strand, there are too few shorebirds: some solitary sandpipers, least timid of the waders, but that is it. The ranching of the mudflats has left little for them to eat, or created too much commotion. Farther out, there are too few seabirds. In Beihai's port, and in the harbours up the coast, a vivid tableau hints at why.

Here is a throng of vessels and a harbour life that in the West you see only in turn-of-the-last-century photogravures of San Francisco, Marseille or Brixham. Hundreds of big wooden fishing boats—pair-trawlers, beam-trawlers, draggers, longliners and squid boats—are rafted up in rows across nearly the whole breadth of the harbour, leaving only a narrow cut for smaller vessels moving chaotically about the port: man-and-wife fishing boats, driven forward in a series of regular explosions, old men sculling open boats with a single tethered oar twisted from side to side at the stern—the *yuloh*, as ancient as China itself. Everywhere is shouting, greetings, in-jokes. Ashore, groups of women on the ground gut fish and throw them in salt tubs. But one thing is striking: the skate, yellow croaker and pomfret are baby-sized, some smaller than your hand. These astoundingly productive waters are being overfished.

The history of birding in China, especially along its coast, is bound up with the story of Western imperialism, and the missionaries that arrived on its coat-tails. Père Armand David is best known for discovering the giant panda and introducing Père David's deer to stately parks in Europe. But he also noted 772 bird species, collecting 470 of them. Robert Swinhoe, China's finest early birder, was the British consul in Amoy (modern-day Xiamen) and the first British representative on Formosa (Taiwan). He did not think his arrival there auspicious, for on the waterlogged crossing he recorded losing ten shirts and six nightshirts. But over two decades from 1854, Swinhoe collected and described 650 Chinese species. He is immortalised in the stunning Swinhoe's pheasant, endemic to Taiwan, as well as a rail, a snipe, an egret and a storm-petrel that breeds off the rocky coasts of Japan. On a naval expedition to Hainan to hunt out pirates, Swinhoe found time to head into the interior, discovering 19 unrecorded species. The Chinese mandarin accompanying him on his rambles thought it the strangest of occupations, but kept him refreshed with tea, cakes, a pipe and a stool to sit on.

Until a decade ago, Hong Kong was the undisputed centre for birders: as a pastime, bird-watching was almost unknown on the Chinese mainland, and locals still ask visitors peering through binoculars whether the bird they are looking at is worth a lot. Hong Kong's bird-watching society, the first in greater China, is now a half-century old. British diplomats continued Swinhoe's passion: the leader of the Sino-British talks arranging Hong Kong's return in 1997, later ambassador in Beijing, is a leading authority on China's birds (and an even greater one on its moths). Hong Kong's current chief executive lists birding as his chief passion.

The first reserve on the China coast properly to protect migrating shorebirds and waterfowl was set up in 1975 in Hong Kong, at Mai Po, and is now run by the World Wide Fund for Nature (WWF). Its mudflats, mangroves and shrimp ponds are a crucial staging post on the East Asian-Australasian flyway, along which several million birds barrel each spring and autumn. At peak migrations times, the sky over Mai Po is dark with ducks and waders, harried by the eagles and hawks that hunt them. Farthest travelled is the red knot, which breeds on the high Arctic tundra and winters as far away as South Island, New Zealand. Rarest are the Nordmann's greenshank, whose 1,000 surviving pairs breed on Sakhalin; the tiny but striking spoon-billed sandpiper from north-east Siberia; and the much larger black-faced spoonbill, whose population has doubled to over 2,000, thanks to better protection of its wintering sites. Up to a quarter of all black-faced spoonbills winter in Hong Kong, returning to breed on islets in the Korean peninsula's demilitarised zone. Mai Po is Hong Kong's best kept secret.

Oxford Scientific Films



Many birds face a precarious future

In recent years the annual number of waders stopping at Mai Po has steadily increased, to around 60,000. Yet this rise causes the reserve's managers more concern than joy. Staging posts along the flyway, used by migrating birds for millennia, are being over-exploited for shellfish. At least, says Wen Xianji of the WWF, work with foreshoremen in Guangdong and Fujian provinces to minimise bird disturbances is paying off.

Worse, rich mudflats are being "reclaimed" for development. The most notorious example, in South Korea,

is a 20-mile (33km) seawall built to enclose a huge estuary and mudflats at Saemangeum, an area two-thirds the size of Singapore where 400,000 birds, including the spoon-billed sandpiper and Nordmann's greenshank, had fed. But reclamation down the Chinese coast is happening at breakneck pace, with few controls: not even official reserves are safe from developers. More birds are pushed down to Mai Po as a result. They arrive exhausted and Mai Po, however well protected from fishermen and foreshoremen, lacks the food resources to allow so many birds to build up reserves of fat for their onward migration.

And then there is pollution. The press of several hundred million people along the coast threatens marine organisms at risk from river discharges, heavy metals and pesticides from farmed shrimp ponds, oil spills, antifouling paint on boats and other chemical contaminants. Brian Morton, an expert on China's seashore ecology recently retired from the University of Hong Kong, points out that only one-tenth of Chinese sewage is treated, leading to eutrophication and algal blooms in the East China Sea and Yellow Sea. In addition, several tens of thousands of seabirds are reckoned to be killed every year by an entangling mass of flotsam—fishing gear, grocery bags and the like. "As a biologist," says Mr Morton, "I know that ecosystems can be restored. Still, the waters of China are virtually beyond redemption."

But the rise of an entirely new species in China brings hope to conservationists: the mainland birdwatcher. First sightings came from the boom city of Shenzhen, across the bay from Mai Po. Since 2004 the Shenzhen Birdwatching Society has fought to keep developers away from the Futien reserve that acts as a complement to Mai Po. Now, two dozen such societies have sprung up in China, mainly along the coast whose development has brought prosperity (you need money to be a birdwatcher: for binoculars, spotting scope and camera equipment). This growing band is trying to halt the destruction that development has brought, teaching youngsters about the joy of birds and holding local governments and businesses to account when they trash wild places. "Let's hear it", says Mr Morton, "for the birdwatchers."

A sight from the past

Eight years ago another species came suddenly back from the dead. In 1937 a Chinese ornithologist, T.H. Shaw, in the days of innocence when the scientific approach to the study of birds was to blast them out of the sky, had killed 21 Chinese crested terns at their breeding colony on an island off the Shandong coast, near where the sailing Olympics were held this year. The specimens were stuffed into a museum drawer in Beijing. The Chinese crested tern was not seen again and was presumed extinct.

Until 2000, that is. That summer, a group of Taiwanese twitchers were on an islet just off the Fujian coast, part of the disputed Mazu archipelago that has been controlled by Taiwan since the end of China's civil war in 1949. They were admiring a colony of greater crested terns when, to their amazement, they counted four pairs of an unusual crested tern among them which sported a diagnostic black tip to their orange bills: the Chinese crested tern.

The news electrified an irrepressible young mainland ornithologist, Chen Shuihua, from Zhejiang province's natural history museum in Hangzhou. Mr Chen had started his career studying the ecology of city birds, before switching to seabirds "because to my amazement no one in China was studying them." Knowing for sure that the Chinese crested tern was extinct on its northern former breeding grounds in Shandong, he figured that the main hope of finding other breeding birds was in the Zhoushan chain, a rocky group of 200 islands strung out, equidistant between Mazu and Shandong, across the mouth of Hangzhou bay.

Over the course of two summers, Mr Chen slept aboard a fishing boat, travelling from island to island over the whole chain. In August of the second year, he found a handful of Chinese crested terns nesting among a colony of greater crested terns. For two further years, he searched the rocky coastal islets south of the Zhoushan group and found a few more. He was able to hazard at the time that perhaps 50 terns survived.

Soon, however, disaster. In 2005 no birds bred successfully, their chicks carried away from barren rocks by two August typhoons. In 2005 and 2006 not a single Chinese crested tern was to be seen. In 2007 Mr Chen found four breeding pairs among a 1,000-strong colony of greater crested terns. Then one summer night a fisherman came out and took away 1,000 of the colony's eggs, including all from the Chinese crested terns. The haul would have earned him 35,000 yuan ($5,000) from coastal restaurants where seabirds' eggs have become a delicacy—a good night's work for someone who could not make that much in a year of fishing.

Liao Penshing



China's most elusive bird

Mr Chen has begged and pleaded with the authorities in Zhejiang province for more protection—boats and wardens—for breeding colonies, and tried to persuade local fishing communities of their special value. One humid dawn last August, I joined Mr Chen and his Zhoushan warden aboard a decrepit craft that served well enough as a safe patrol vessel—so long, I thought, as the sea remained flat. The boat shook and shuddered as it steamed out to a cluster of four islets some way out from the main island.

Around the islets, a brown riptide; above, as we approached, a swirling ball of greater-crested terns and black-tailed gulls, with Swinhoe's egrets orbiting around the outside. As the skipper landed us on the first of the rocks, the cries of the crested terns became deafening. Indignant parents charged us at eye level before rising over our heads and turning back for another run. One of them, I noticed as it skimmed my head, had a bright orange bill with a black tip: an exhilarating moment.

With nets and bags of leg rings, we spread out over the rocks. Everywhere were flightless chicks, some scurrying to hide in hollows, others heading for the sea. I now understand better the force of the term "treading on eggshells", for greyish chicks and speckled eggs lay everywhere, easily overlooked on the guano-spattered rocks. I began to wonder whether my oafishness would do more harm to the Chinese crested tern than T.H. Shaw did.

In a stench of ammonia, we ringed the hundreds of chicks as quickly as we could. And there, not far from each other, two chicks were sitting that were whiter than the mottled grey offspring of the greater crested terns. They were the first Chinese crested terns ever to be ringed, and the only offspring of the species in 2008.

By Mr Chen's calculation, that brings the population of what is possibly the world's rarest bird up to 32, surviving in colonies near some of the densest human populations on earth. The ringing is just the first step in trying to understand a bird about which almost nothing is known. It is not clear whether the breeding population around the Zhoushan islands mixes with the one on Mazu. Nor is the birds' wintering range known—possibly the Philippines, Borneo and perhaps Myanmar. Recent funding for a conservation plan, through Birdlife Asia, a conservation group, is a start. But protecting colonies from egg-hunters is the immediate challenge, and not only in Zhejiang province. For much of the past half-century, the Taiwanese military presence on Mazu has been a deterrent to mainland poachers. Now peace is breaking out across the Taiwan Strait and Taiwanese soldiers are loth to create a political incident by arresting Chinese fishermen.

Mr Chen has been lobbying the authorities vociferously. "If I were a government official," he says, "maybe I'd be more prudent. But it's my duty to speak out, and as a scientist, I'm listened to." He's getting somewhere. As well as providing the rickety patrol vessel and its crew, local authorities even take pride that something so rare falls within their jurisdiction. Mr Chen and fellow birdwatchers spread their

passions in local schools, holding school “bird fairs” and celebrating wetlands and wildness that most Chinese people regard as a waste of space or food.

Western environmentalists brought up on direct action and confrontation might view the China’s attempts to save the environment as wet and weak-kneed. Others search in vain in China’s environmental movement for a democratic vanguard, in evidence during the last days of the Soviet Union. Mass protests, such as successful demonstrations in 2007 by residents of Xiamen against a planned chemical plant on the coast, are localised.

Yet in protean China, one constant is that opposing the Communist state brings down a mailed fist. If protecting habitats and species is the aim, Mr Chen and his kind are better at the job than outsiders give them credit for. As Mr Chen points out, influencing government policy was unthinkable two decades ago. So even as they scan the woodlands, rocky islets or mudflats, China’s environmentalists, ever so slowly, are giving a boost not just to other species but also to citizens, for they are becoming a social force. Another reason, then, to hear it for the birdwatchers.

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The science of shopping

The way the brain buys

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Retailers are making breakthroughs in understanding their customers' minds. Here is what they know about you



IT MAY have occurred to you, during the course of a dismal trawl round a supermarket indistinguishable from every other supermarket you have ever been into, to wonder why they are all the same. The answer is more sinister than depressing. It is not because the companies that operate them lack imagination. It is because they are all versed in the science of persuading people to buy things—a science that, thanks to technological advances, is beginning to unlock the innermost secrets of the consumer's mind.

In the Sainsbury's in Hatch Warren, Basingstoke, south-west of London, it takes a while for the mind to get into a shopping mode. This is why the area immediately inside the entrance of a supermarket is known as the "decompression zone". People need to slow down and take stock of the surroundings, even if they are regulars. In sales terms this area is a bit of a loss, so it tends to be used more for promotion. Even the multi-packs of beer piled up here are designed more to hint at bargains within than to be lugged round the aisles. Wal-Mart, the world's biggest retailer, famously employs "greeters" at the entrance to its stores. Whether or not they boost sales, a friendly welcome is said to cut shoplifting. It is harder to steal from nice people.

Immediately to the left in Sainsbury's is another familiar sight: a "chill zone" for browsing magazines, books and DVDs, tempting impromptu purchases and slowing customers down. But those on a serious mission will keep walking ahead—and the first thing they come to is the fresh fruit and vegetables section.

For shoppers, this makes no sense. Fruit and vegetables can be easily damaged, so they should be bought at the end, not the beginning, of a shopping trip. But psychology is at work here: selecting good wholesome fresh food is an uplifting way to start shopping, and it makes people feel less guilty about reaching for the stodgy stuff later on.

Shoppers already know that everyday items, like milk, are invariably placed towards the back of a store to

provide more opportunity to tempt customers. This is why pharmacies are generally at the rear, even in "convenience" stores. But supermarkets know shoppers know this, so they use other tricks, like placing popular items halfway along a section so that people have to walk all along the aisle looking for them. The idea is to boost "dwell time": the length of time people spend in a store.

Traditionally retailers measure "footfall", as the number of people entering a store is known, but those numbers say nothing about where people go and how long they spend there. But nowadays, a ubiquitous piece of technology can fill the gap: the mobile phone. Path Intelligence, a British company working with the Massachusetts Institute of Technology, tracked people's phones at Gunwharf Quays, a large retail and leisure centre in Portsmouth—not by monitoring calls, but by plotting the positions of handsets as they transmit automatically to cellular networks. It found that when dwell time rose 1% sales rose 1.3%.

Having walked to the end of the fruit and vegetable aisle, Basingstoke's hard-core shoppers arrive at counters of prepared food, the fishmonger, the butcher and the deli. Then there is the in-store bakery, which can be smelt before it is seen. Even small supermarkets now use in-store bakeries. Mostly these bake pre-prepared items and frozen dough, and they have boomed even though central bakeries that deliver to a number of stores are much more efficient. They do it for the smell of freshly baked bread, which makes people hungry and thus encourages people to buy not just bread but also other food, including frozen stuff.

Most of the information that shoppers are bombarded with is visual: labels, price stickers and advertising. But the wafting bread aroma shows smell can usefully be stimulated too, says Simon Harrop, chief executive of BRAND sense agency, a British specialist in multi-sensory marketing. In the aisle by the laundry section he suggests introducing the smell of freshly laundered sheets. Even the sound of sheets being folded could be reproduced here and contained within the area using the latest audio technology. The Aroma Company, which Mr Harrop founded, has put the smell of coconut into the shops of Thompson, a British travel agent. Some suntan oils smell of coconut, so the scent is supposed to remind people of past holidays. The company even infuses the fresh smell of citrus into a range of clothing made by Odeur, a Swedish company. It can waft for up to 13 washes.

Such techniques are increasingly popular because of a deepening understanding about how shoppers make choices. People tell market researchers and "focus groups" that they make rational decisions about what to buy, considering things like price, selection or convenience. But subconscious forces, involving emotion and memories, are clearly also at work.

Scientists used to assume that emotion and rationality were opposed to each other, but Antonio Damasio, now professor of neuroscience at the University of Southern California, has found that people who lose the ability to perceive or experience emotions as the result of a brain injury find it hard or impossible to make any decisions at all. They can't shop.

Oh, that's what I want

Researchers are now exploring these mechanisms by observing the brain at work. One of the most promising techniques is functional magnetic resonance imaging (fMRI), which uses a large scanner to detect changes in the blood flow in parts of the brain that correspond to increases or decreases in mental activity. People lying inside the scanners are shown different products or brands and then asked questions about them. What they say is compared with what they are thinking by looking at cognitive or emotional activity. The idea is that if, say, a part of the brain that is associated with pleasure lights up, then the product could be a winner. This is immensely valuable information because eight out of ten new consumer products usually fail, despite test marketing on people who say they would buy the item—but whose subconscious may have been thinking something different.

"We are just at the frontier of the subconscious," says Eric Spangenberg, dean of the College of Business at Washington State University and an expert on the subtleties of marketing. "We know it's there, we know there are responses and we know it is significant." But companies commissioning such studies keep the results secret for commercial reasons. This makes Dr Spangenberg sure of one thing: "What I think I know, they probably know way more."

We are just at the frontier of the subconscious

Retailers and producers talk a lot about the "moment of truth". This is not a philosophical notion, but the point when people standing in the aisle decide what to buy and reach to get it. The Basingstoke store illustrates some of the ways used to get shoppers' hands to wobble in the direction of a particular product. At the instant coffee selection, for example, branded products from the big

producers are arranged at eye-level while cheaper ones are lower down, along with the supermarket's own-label products.

Often head offices will send out elaborate plans of where everything has to be placed; Albertsons, a big American supermarket chain, calls these a "plan-a-gram". Spot-checks are carried out to make sure instructions are followed to the letter. The reason for this strictness is that big retailers demand "slotting fees" to put suppliers' goods on their shelves, and these vary according to which positions are considered to be prime space.

But shelf-positioning is fiercely fought over, not just by those trying to sell goods, but also by those arguing over how best to manipulate shoppers. Never mind all the academic papers written on how best to stack shelves, retailers have their own views. While many stores reckon eye-level is the top spot, some think a little higher is better. Others charge more for goods placed on "end caps"—displays at the end of the aisles which they reckon to have the greatest visibility (although some experts say it all depends on the direction in which people gyrate around a store—and opinion on that is also divided). To be on the right-hand-side of an eye-level selection is often considered the very best place, because most people are right-handed and most people's eyes drift rightwards. Some supermarkets reserve that for their own-label "premium" goods. And supermarkets may categorise things in different ways, so chapatis may not be with breads, but with ready-meals of the Indian variety. So, even though some suppliers could be paying around $50,000 per store a year for a few feet of shelf space, many customers still can't find what they are looking for.

Technology is making the process of monitoring shopper behaviour easier—which is why the security cameras in a store may be doing a lot more than simply watching out for theft. Rajeev Sharma, of Pennsylvania State University, founded a company called VideoMining to automate the process. It uses image-recognition software to scan the pictures from security cameras of shoppers while they are making their selections. It is capable of looking at the actions of hundreds of thousands of people. It can measure how many went straight to one brand, the number that dithered and those that compared several, at the same time as sorting shoppers by age, gender and ethnicity.



VideoMining analysed people in convenience stores buying beer. Typically it would take them two minutes, with the majority going straight to one brand. "This shows their mind was already made up; they were on autopilot," says Dr Sharma. So brewers should spend their marketing money outside, not inside, the store. The analysis can also help establish the return on investment to a new advertising campaign by showing what proportion of beer-buyers can be persuaded to consider rival brands. Another study in a supermarket some 12% of people spent 90 seconds looking at juices, studying the labels but not selecting any. In supermarket decision-making time, that is forever. This implies that shoppers are very interested in juices as a healthy alternative to carbonated drinks, but are not sure which to buy. So there is a lot of scope for persuasion.

Reducing the selection on offer might help too. Cassie Mogilner of Stanford University and her colleagues found in a study that consumers like unfamiliar products to be categorised—even if the categories are meaningless. In a study of different coffees they found people were more satisfied with their choice if it came from a categorised selection, although it did not matter if the categories were marked simply A, B and C, or "mild", "dark roast" and "nutty".

Despite all the new technology, simply talking to consumers remains one of the most effective ways to improve the "customer experience". Scott Bearse, a retail expert with Deloitte Consulting in Boston,

Massachusetts, has led projects observing and quizzing tens of thousands of customers about how they feel about shopping. It began when a client complained that he had mountains of data on the one in four people that entered his store and bought something, but knew hardly anything about the vast majority who left without making a purchase. The "customer conversion" rate varies between types of store: it could be around 20% in some department stores but reach almost 100% in a grocery. And within the same store the conversion rate will vary in different sections.

People say they leave shops empty-handed more often because they are "unable to decide" than because prices are too high, says Mr Bearse. Working out what turns customers off is not difficult, yet stores still struggle with these issues: goods out of stock, long queues at the checkouts and poor levels of service. Getting customers to try something is one of the best ways of getting them to buy, adds Mr Bearse. Deloitte found that customers using fitting rooms convert at a rate of 85% compared with 58% for those that do not do so.

Often a customer struggling to decide which of two items is best ends up not buying either. A third "decoy" item, which is not quite as good as the other two, can make the choice easier and more pleasurable, according to a new study using fMRI carried out by Akshay Rao, a professor of marketing at the University of Minnesota. Happier customers are more likely to buy. Dr Rao believes the deliberate use of irrelevant alternatives should work in selling all sorts of goods and services, from cable TV to holidays.

A lack of price tags is another turn-off, although getting that right will become crucial with the increasing use of Radio Frequency Identification (RFID) tags. These contain far more information than bar codes and can be scanned remotely. People have been predicting for years that they would shortly become ubiquitous; but, with costs continuing to fall, they eventually will. Tills will then become redundant, because everything shoppers put in their trolleys will be automatically detected and charged to their credit cards.

The notion of shoppers wearing brain-scanning hats would be ridiculous

The basic mechanisms to do this are already in place. A store or loyalty card can be fitted with an RFID tag to identify customers on arrival. A device on the trolley could monitor everything placed in it, check with past spending patterns and nudge customers: "You have just passed the Oriels, which you usually buy here."

Mind over matter

Technology will also begin to identify customers' emotions. Dr Sharma's software has the potential to analyse expressions, like smiles and grimaces, which are hard to fake. And although fMRI scanners presently need a crane to move, something that provides a similar result might one day be worn on your head. Researchers believe it is possible to correlate brain patterns with changes in electrical activity in the brain, which can be measured with electroencephalography (EEG) using electrodes placed on the scalp. Small EEG machines are already available, especially for computer gamers, which fit on the head.

The notion of shoppers wearing brain-scanning hats would be ridiculous if it were not so alarming. Privacy groups are already concerned about the rise of electronic surveillance that records what people do, let alone what they might be thinking. The San Francisco-based Electronic Frontier Foundation is concerned that because RFID tags can be read at a distance by anyone with the necessary equipment they could create "privacy pollution"; being used to discover what is in not only someone's shopping trolley, but also their cupboards.

To some degree shoppers would have to "buy in" to the process: a bit like having an account with an online retailer which comes with the explicit knowledge that your past purchases and browsing history will be monitored and used to pitch purchase suggestions. And if that makes shopping easier—especially if sweetened with discounts—then consumers might sign up to it. When Dr Sharma asks shoppers what they think about his video-monitoring he says most people do not mind.

But what if psychological selling is done stealthily? That way lies grave perils. It is the anger not of privacy groups that retailers should fear, but of customers at being manipulated from behind the scenes.

There have been backlashes before: "The Hidden Persuaders" by Vance Packard, an American journalist, caused a sensation when it was first published in 1957 by revealing physiological techniques used by advertisers, including subliminal messages. It is what got Dr Spangenberg interested in the subject. He thinks shopping science has limits. "I don't think you are going to be able to make someone buy a car or a

computer that they don't need," he says. "But you might persuade them to choose one model instead of another. And importantly, they wouldn't know it." But if they did realise psychological methods were being used to influence their choice, "the counteraction can be so huge it can put someone off buying anything at all," he adds.

Which is probably why at the end of this shopping trip there is not much in the trolley. At least the temptations at the checkout are easy to avoid: a few celebrity magazines and bags of sweets at the eye-level of children. But that will change too.

Barry Salzman, the chief executive of YCD Multimedia in New York, has big plans for the area around a cash till. He is using digital video screens displaying ads that relate to what someone is buying and which can also be linked with facial-recognition software to refine the displays according to the customer's age or sex. His system is already being used in Aroma Espresso Bars in America to present, say, an advert for a chocolate croissant to someone buying only a cappuccino.

But the checkout in this Sainsbury's comes to a halt because the teenager at the till is not old enough to sell alcohol and can't attract the attention of a supervisor for permission to ring up a multi-pack of beer, which is therefore left behind on the counter. The science of shopping is a marvellously sophisticated business; the practice is still a little more primitive.

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Booms and busts

The beauty of bubbles

Dec 18th 2008
From The Economist print edition

Property bubbles have painful consequences. They also have useful ones

Bloomberg



THE fireworks could be seen from space (allegedly), putting China's Olympic displays to shame. Hollywood celebrities studded a guest-list of 2,500 people. Kylie Minogue, a diminutive Australian singer, cavorted in a gold and black corset designed by Jean-Paul Gaultier. Guests consumed an estimated 1.7 tonnes of lobster.

The launch party for the Atlantis hotel in Dubai on November 20th was a perfect, noisy finale to the world's latest age of excess. But its loudest echoes—the man-made islands, the iconic hotels, the overheated property market, the celebrities and the sun—are from another, more distant time: south Florida in the 1920s.

The summer of 1925 was mania time in Miami. Speculators descended on the city, hungry to buy land in the hottest property market in America. Salesmen swarmed to meet them. "Bird dogs" (youngsters looking to make their way in the industry) scanned the new arrivals at Miami's train station and steered the most promising prospects to their bosses' offices.

The heart of the boom was Flagler Street, clogged with traffic and tourists. Would-be buyers were put in the hands of "binder boys", named for the binders in which sales were recorded. Transactions were swift and shoddy. Buyers had to put down only 10% of the purchase price for the lot they were buying to close a deal; further instalments were payable when the sale was legally recorded. Many new owners had no intention of waiting that long. In another echo of modern-day Dubai, they wanted simply to flip their property, which often had yet to be dredged from the ocean, on to the next man. Some bits of land were sold and resold several times during a single day.

Among the principal beneficiaries of Florida's extraordinary land boom was Carl Graham Fisher, a serial entrepreneur who can take much of the credit for turning Miami Beach from a swampy strip of mangrove trees into the most talked-about resort in the country. As prices soared, so did Fisher's fortune, at least on paper.

But he saw trouble ahead. Along with a handful of others, he had spent many years turning his vision of Miami Beach into reality. The quick buck was not his goal. As sales grew more and more frenzied, he tried to dampen things down. In a letter to the publisher of the *Miami Daily News*, whose pages were fattened with property advertisements, he gave warning that many of the development schemes were misleading and that prices had become wildly inflated: "Some of the property being sold in Florida will not bring as

much money in 30 years as it is selling for now." Fisher did more than write letters. He instructed his own salesmen to raise the required down payment on land from 10% to 25%, and to entertain bids only from buyers who planned to develop the lots on offer.

Fisher's foreboding was soon proved justified. Savvier investors began to pull back from their interests in Florida. In the winter of 1925-26 the number of visitors dropped. So did the level of property transactions. A capsized ship blocked entry to Miami harbour in early 1926, slowing the pace of construction work. Banks that had lent money to property developers wobbled. As concern grew that the skin of Florida's bubble was tearing, nature provided a drawing-pin of its own. On September 18th 1926 a hurricane hit south Florida, ripping through the hotels, piers, marinas and mansions that had been put up in the preceding years.

The storm killed 400 people and made another 50,000 homeless. It also marked a decisive downward shift in south Florida's economic fortunes. "Castles in the Sand", a biography of Fisher by Mark Foster, records that bank deposits in the region fell by 75% between 1925 and 1929, bankruptcies jumped by 600% and the value of building permits slumped from $101m to less than $13m. And all this was before the Depression piled on further misery.

Fisher himself did not escape the damage. His worries about Florida had not stopped him embarking on another grand project, to develop a dazzling resort much farther up America's east coast at Montauk Point on the tip of Long Island. But his ability to finance the Montauk scheme largely depended on the money flowing in from Florida, money that dried up as the bubble deflated. With no cash in the bank and big bills to pay, Fisher was forced gradually to dismantle his Florida empire, selling and bartering land in a desperate bid to balance the books.

The Montauk project went bust in 1932. By 1933 most of his remaining employees in Florida were being paid in property deeds rather than cash. Fisher declared bankruptcy in 1935 and died four years later, still in Miami, bloated from cirrhosis of the liver but a shrunk figure in every other way. His former wife, Jane, described his final years in Miami Beach: "Through its streets Carl moved slowly, hardly known by the new crowd whose cars flashed through the streets he had built."

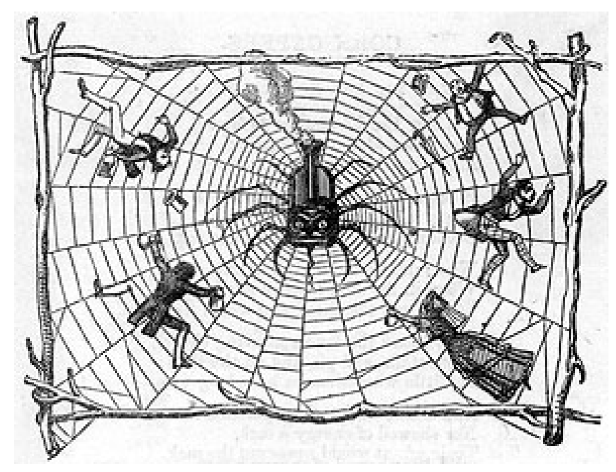
What is left behind

The story of Florida's land boom is a classic example of a bubble and its dangers. The costs are clear: growing speculation as the bubble inflates, driving prices and value further and further apart; the sharks and the fraudsters, peddling fantasies to misguided investors; the gathering doubts about sustainability; and then the calamitous bursting of confidence, causing debts, defaults and despair.

But the Florida boom is also a reminder that the bubble metaphor does not do full justice to the consequences of a financial boom and bust. After all, a bubble is evanescent. Once it has popped it leaves nothing behind. In Miami and the rest of south Florida this was patently not the case.

Bankrupt he may have been but Fisher had streets to walk through. When he and Jane first visited Florida in 1910, the city of Miami was already growing fast but Miami Beach was home principally to mosquitoes. The painstaking efforts of Fisher and others to dredge the bay, clear the mangrove roots and landscape the new terrain had irrevocably changed Miami Beach before the 1920s even began. The boom years of that decade saw the scale of construction accelerate and widen. Dozens of flagship hotels were built. Resorts such as Boca Raton and Coral Gables were created in other parts of Florida. The boom had its share of schemes that never got anywhere but it also left behind a lasting physical legacy of buildings and streets and beaches and man-made islands.

Mary Evans



Rash investors caught in the railway web

This does not always happen, of course. The South Sea bubble in 1720 saw a wave of speculative investment in shares that left almost nothing of tangible value behind. The mania reached its peak with the flotation of a firm whose prospectus described itself as "a company for carrying out an undertaking of great advantage, but nobody to know what it is".

But there are plenty of other booms that can claim to have bequeathed something of value, to have been destructively creative. Arguably the greatest bubble in history, at least when measured by the scale of investment as a proportion of national income, was Britain's "railway mania" in the 1840s. During a four-year period promoters presented literally hundreds of schemes to Parliament to build new railway routes.

Investors rushed to put money into the railways, paying a small deposit for the initial legal and surveying work and committing themselves to further payments as the building work proceeded. The cleverer ones sold their shares on, usually to smaller investors, before those later instalments came due. Newspapers glutted themselves on advertising from promoters calling for subscribers to their schemes.

Share prices shot up, peaking in 1845, even as the amounts of capital being committed to the industry made competition ever fiercer and business plans ever rosier. Between the start of the mania in 1844 and its end in 1847, Parliament approved 9,500 miles or 15,000km of new railway lines (Britain's current network mileage is 11,000 miles). Roughly a third of the mileage that was approved during this period never materialised. Even so, at the peak year of construction in 1847 the railways soaked up investments worth almost 7% of GDP in a single year. By comparison, the massive telecoms boom of the 1990s absorbed capital totalling 1-1.5% of America's national income over a period of several years.

Share prices quickly reversed course. Investors were asked to make further payments just as doubts about the viability of many schemes hardened and as interest rates rose. According to Sandy Nairn, the author of "Engines That Move Markets", a book on technology manias, anyone who invested in railways in 1847 would have had to wait until the end of the century to get their money back.

Bad for shareholders, good for workers

But if shareholders lost out, the economy gained. Most of the routes built as a result of the mania eventually proved viable, and the spillover effects were immense. One route in particular, the Great Northern line linking London and the north of England, was especially valuable: until it was built, a single, congested track carried all traffic heading northward out of London. The normal rule of thumb was that a canal (subject of another boom earlier in the 19th century) would halve the cost of transporting coal, and that rail would halve it again. The new network greatly improved the economics of many industries and kept vast numbers of people in work. Andrew Odlyzko, who is researching a book on the topic, says that the railway mania may even help to explain why Britain did not succumb to the revolutionary fervour that swept Europe in 1848.

The 1990s telecoms boom is the most obvious modern-day parallel to the railway mania. The business of laying fibre-optic cable, both terrestrially and under the sea, used to be the preserve of incumbent telecoms operators sharing the burden of capital-intensive projects. But then private operators, anticipating a surging demand for capacity thanks to the growing volume of internet traffic and benefiting from technological advances that sharply reduced the costs, challenged this set-up with an explosive period of investment in new cable routes.

Just as the railway mania carried on after the competitive landscape had changed for the worse, so these new cable companies kept on investing even as the supply ballooned. One reason for this, says Stephan Beckert of TeleGeography Research, a research firm, was that technological progress seemed to confer a "late-mover advantage" by reducing the operating costs of firms that invested later than others. But, whatever the assumptions, they were flawed. The upshot was a huge increase in the number of competitors and of overlapping fibre-optic networks.

Much of this new capacity has yet to be put into action, or "lit". And most of the money invested during the boom was indeed wasted. But some of the infrastructure laid then is proving useful now. TeleGeography reckons that new transatlantic capacity will not be needed until 2013, ten years after the end of the boom, and that the supply of terrestrial fibre will last far longer.

Sceptics have an obvious rejoinder to the observation that bubbles can leave behind useful physical assets: those assets, they say, would eventually have been built anyway, and on better terms. They have a point. The main routes built as a result of the railway mania would surely have come about with or without the frenzy of the 1840s, and been part of a more rationally planned national network.

Robert Stephenson, son of George and one of the principal figures behind the expansion of Britain's railways, reckoned that a network that was just as productive could have been built for a third less than the actual cost. Similar calculations would probably apply to the investment in fibre-optic cables better suited to rising demand. For a bubble to have a genuinely valuable lasting effect, it must do something more than construct useful things wastefully. There are at least two ways in which it can do this.

The first relates to spillover effects. Bubbles, when they burst, are ruinous to direct investors but can be helpful to other parts of the economy. The railway boom made Britain's economy more productive by reducing transport costs. It also integrated cities and regional economies. One curiosity of pre-railway Britain was that different parts of the country had their own time zones based on when dusk fell. The construction of a national railway network meant a national railway timetable—and the arrival of a countrywide time zone.

The most obvious spillover effect of the telecoms boom was that the oversupply sent the price of internet traffic plunging. That made the economics of bandwidth-gobbling services, such as internet video, much more attractive. The rapid rise of companies such as YouTube would not have been possible without all that extra cable. (However, the often-heard argument that the fibre-optic boom enabled India to join the global economy does not stand up: no submarine cables to India were laid during the boom.)

The second thing that a bubble can do is to make a more profound impression on the public mind than a more conservative period of economic development can manage. The 1920s land boom implanted the idea of Florida as a glamorous holiday destination that has lasted to this day. Fisher, who displayed an unending genius for promotion, can take much of the credit.

Corbis



Warren Harding and his caddie

He used a visit by Warren Harding, the then president-elect, to win early coverage for Miami Beach and he arranged high-profile tennis, golf and polo tournaments to garner more publicity. He imaginatively combined the two: this picture shows Harding employing one of Fisher's pet elephants as a caddie at the Flamingo hotel golf course. Fisher also put up a huge sign in Manhattan during the winter of 1921 boasting "It's always June in Miami Beach." The pricking of the bubble never erased the fun-drenched image of Florida that was created during the boom.

The impression left by the railway mania was of a different kind. Although the bubble clearly failed to deliver good returns to its investors, it did add greatly to the depth and awareness of financial markets. According to Mr Odlyzko, the number of families holding shares doubled during the period. He reckons that the introduction of general limited liability in Britain in 1856 was hastened by the experience of limited liability for authorised railway schemes during the boom.

So what about the rich world's present miseries? Will the financial bubble that has just burst over our heads leave some legacy of lasting value? Searching for the positives from the recent debt binge may seem Panglossian. But the lesson of previous bubbles is that even the wildest manias may do some good. "You can start with misallocation of capital and stupidity and still end up with something useful," remarks Mr Nairn.

Soapy linings

The bubble was not accompanied by huge infrastructure expansion, at least in the Western world. But on a fairly minor scale, it has left some valuable physical legacies. Look at Britain, for instance. Rapid improvements to some of the more bedraggled cities of northern England have undoubtedly made them much more pleasant places to live in. A lot of new high-rise buildings in the centres of such cities as Manchester and Leeds would not have been built had it not been for the house-price boom, says Chris Hamnett, an academic specialising in housing.

Farther south in Britain, the luxury riverside developments that now dot the banks of the Thames in London may be empty for the moment but will find occupiers eventually. Canary Wharf, London's gleaming financial district, is largely the creation of two booms: the one in the late 1980s, after which the area's initial developers ran aground, and the massive expansion of the city's financial-services industry during the past ten years or so. There will be fewer bankers around over the next few years, of course, but an area that was derelict less than 30 years ago is now securely positioned as one of the world's major financial hubs.

The boom has had helpful effects at the other end of the property spectrum too. Rising housing prices and cheap money allowed many ethnic minorities in the United States to sell up and move to the suburbs, where crime is lower, schools are better and jobs are more plentiful. Property prices in the suburbs and exurbs—places such as Victorville, a small town some miles from Los Angeles which has filled up with African-Americans moving from the inner city—have fallen back steeply in recent months. But for those who manage to stay in their new houses, life will be a great deal better than it was.

The boom's greatest benefits are likely to be in such places as Dubai, where infrastructure started from a much lower base than in the rich world. Though a correction is now under way, the emirate's frothy property market is not going to endure anything like the downturn that Florida suffered in the 1920s, thanks in part to the depth of government pockets. Whatever the pain, Dubai's soaring new hotels, extravagant land-reclamation projects and brand name will survive this misfortune. "He carved a great city from a jungle," runs the inscription on Fisher's memorial in Miami Beach. Dubai's developers similarly fashioned a city out of the desert.

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Protectionism

The battle of Smoot-Hawley

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From The Economist print edition

A cautionary tale about how a protectionist measure opposed by all right-thinking people was passed

Library of Congress



Hawley and Smoot, the bogeymen of trade

EVEN when desperate, Wall Street bankers are not given to grovelling. But in June 1930 Thomas Lamont, a partner at J.P. Morgan, came close. "I almost went down on my knees to beg Herbert Hoover to veto the asinine Hawley-Smoot Tariff," he recalled. "That Act intensified nationalism all over the world."

According to David Kennedy, an historian, Lamont was "usually an influential economic adviser" to the American president. Not this time. Hoover signed the bill on June 17th: "the tragic-comic finale", said that week's *Economist*, "to one of the most amazing chapters in world tariff history…one that Protectionist enthusiasts the world over would do well to study."

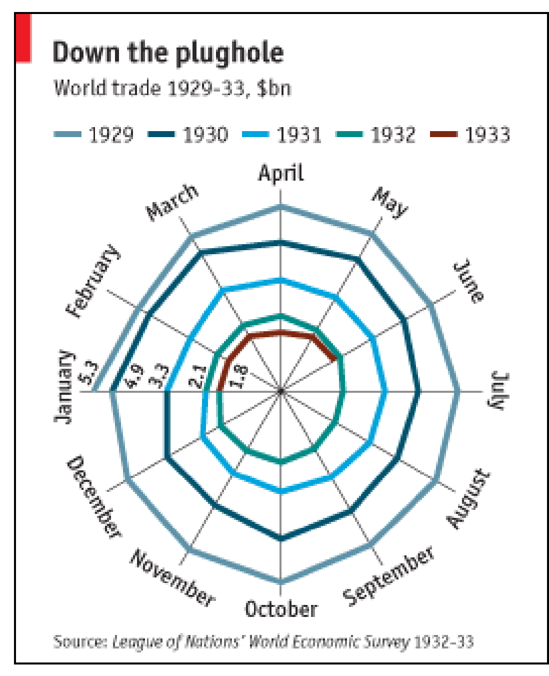
The Tariff Act of 1930, which increased nearly 900 American import duties, was debated, passed and signed as the world was tumbling into the Depression. Its sponsors—Willis Hawley, a congressman from Oregon, and Reed Smoot, a senator from Utah—have come to personify the economic isolationism of the era. Sixty-three years later, in a television debate on the North American Free-Trade Agreement, Al Gore, then vice-president, even presented his unamused anti-NAFTA opponent, Ross Perot, with a framed photograph of the pair. Now, with the world economy in perhaps its worst pickle since the Depression, the names of Hawley and Smoot are cropping up again.

In fact, few economists think the Smoot-Hawley tariff (as it is most often known) was one of the principal causes of the Depression. Worse mistakes were made, largely out of a misplaced faith in the gold standard and balanced budgets. America's tariffs were already high, and some other countries were already increasing their own.

Nevertheless, the act added poison to the emptying well of global trade (see chart). The worldwide protection of the 1930s took decades to dismantle. And bad monetary and fiscal policies were at least based on the economic orthodoxy of the day: economists would tear each other apart over the heresies of John Maynard Keynes. On protection, there was no such division. More than a thousand economists petitioned Hoover not to sign the Smoot-Hawley bill. Bankers like Lamont sided with them; so did editorialists by the score.

The "asinine" bill began as a much smaller beast: the plan was to help American agriculture, which had slumped in the early

1920s. Congress passed several bills to support prices and subsidise exports, but all were vetoed by Calvin Coolidge, Hoover's predecessor. With no obvious logic—most American farmers faced little competition from imports—attention shifted to securing for agriculture the same sort of protection as for manufacturing, where tariffs were on average twice as high. To many of its supporters, "tariff equality" meant reducing industrial duties as well as raising those on farm goods. "But so soon as ever the tariff schedules were cast into the melting-pot of revision," this newspaper wrote, "logrollers and politicians set to work stirring with all their might."



Start rolling

In the 1928 election campaign Hoover and his fellow Republicans promised to revise the tariff. The Democrats, then the freer-trading party, were unusually acquiescent. After comfortable Republican wins in November, Hawley, the chairman of the House Ways and Means Committee, set to work. By the time Hoover was inaugurated in March 1929 and called a special session of Congress to tackle the tariff, his committee had gathered 43 days', five nights' and 11,000 pages' worth of testimony. The door was open to more than just farmers; Hawley's committee heard mainly from small and medium-sized industrial businesses.

The House bill, passed in May, raised 845 tariff rates and cut 82. Douglas Irwin, an economist at Dartmouth and author of a forthcoming book ("The Battle over Protection: A History of US Trade Policy") on which this article draws heavily, says it "tilted the tariff nearly as much toward higher duties on manufactured goods as it increased duties on agricultural imports."

The bill then went to the Senate, where Smoot chaired the Finance Committee. Senators who thought their constituents had lost out in the House—from farming and mining states—were spoiling for a fight. Smoot's committee increased 177 rates from the House version and cut 254. In the next committee stage—which lasted from the autumn of 1929 until March 1930—the whole Senate could take part. Farming- and mining-state senators pruned Hawley's increases in industrial tariffs.

In the last Senate stage, senators from industrial states regrouped, fortified by the gathering economic gloom. "A different voting coalition emerged," says Mr Irwin, "not one based on agricultural versus industrial interests but on classic vote-trading among unrelated goods." Some senators disapproved: Robert LaFollette, a Republican from Wisconsin, called the bill "the product of a series of deals, conceived in secret, but executed in public with a brazen effrontery that is without parallel in the annals of the Senate."

Others saw nothing wrong. Charles Waterman, a Republican from Colorado, declared: "I have stated… that, by the eternal, I will not vote for a tariff upon the products of another state if the senators from that state vote against protecting the industries of my state." The tariff's critics—including Franklin Roosevelt, in his presidential campaign in 1932—dubbed the bill the "Grundy tariff", after Joseph Grundy, a Republican senator from Pennsylvania and president of the Pennsylvania Manufacturers' Association. Grundy had said that anyone who made campaign contributions was entitled to higher tariffs in return.

The Senate's final bill contained no fewer than 1,253 changes from the House's version. The two houses compromised, broadly by moving the Senate's rates up rather than the House's down. In all, 890 tariffs were increased, compared with the previous Tariff Act, of 1922, which had itself raised duties dramatically (for examples, see table); 235 were cut. The bill squeezed through the Senate, by 44 votes to 42, and breezed through the House.

Of all the calls on Hoover not to sign the bill, perhaps the weightiest was a petition signed by 1,028 American economists. A dozen years later Frank Fetter, one of the organisers, recalled their unanimity. "Economic faculties that within a few years were to be split wide open on monetary policy, deficit finance, and the problem of big business, were practically at one in their belief that the Hawley-Smoot bill was an iniquitous piece of legislation."

Some of the names are familiar even now. One was Frank Taussig, a former head of the Tariff Commission (which advised on whether duties should be raised or lowered). Another was Paul Douglas, later a senator (undergraduates are still introduced to the Cobb-Douglas production function). And a third was Irving Fisher.

Fisher is still a giant of economics, best known for his work on monetary theory and index numbers. (He was fallible, though. Shortly before the 1929 stockmarket crash, he declared, "Stock prices have reached what looks like a permanently high plateau.") According to Fetter, Fisher suggested that the petition refer explicitly to the importance of trade to America as a huge creditor nation: if other countries could not sell to the United States, how could they repay their debts? It was also thanks to Fisher that so many economists signed it. He proposed that it be sent to the entire membership of the American Economic Association, rather than to one member of each university's faculty, and offered to meet the extra expense. The total cost was $137, of which Fisher paid $105.

Duty bound

American tariff rates

	Tariff Acts of:		
Article	1913	1922	1930
Raw sugar full duty	1.26¢/lb	2.21¢/lb	2.50¢/lb
Raw sugar Cuban duty	1.005¢/lb	1.76¢/lb	2.00¢/lb
Cattle under 700lb	Free	1.50¢/lb	2.50¢/lb
Cattle over 700lb	Free	1.50¢/lb	3.00¢/lb
Milk	Free	2.50¢/lb	6.5¢/lb
Butter	2.5¢/lb	8¢/lb	14¢/lb
Pig-iron	Free	75¢/ton	$1.125/ton
Hides	Free	Free	10%
Shoes & boots	Free	Free	20%
Matches, ≤100 to a box	3¢/gross	8¢/gross	20¢/gross

Source: Abraham Berglund, "The Tariff Act of 1930". *American Economic Review*, 1930

Expensive ink

Hoover's signature cost rather more—even though the direct effect on American trade was limited. The average rate on dutiable goods rose from 40% to 48%, implying a price increase of only 6%. And most trade, Mr Irwin points out, was free of duty (partly because high tariffs discouraged imports). He estimates that the new tariff reduced dutiable imports by 17-20% and the total by 4-6%. Yet the volume of American imports had already dropped by 15% in the year before the act was passed. It would fall by a further 40% in a little more than two years.

Other, bigger forces were at work. Chief among these was the fall in American GDP, the causes of which went far beyond protection. The other was deflation, which amplified the effects of the existing tariff and the Smoot-Hawley increases. In those days most tariffs were levied on the volume of imports (so many cents per pound, say) rather than value. So as deflation took hold after 1929, effective tariff rates climbed, discouraging imports. By 1932, the average American tariff on dutiable imports was 59.1%; only once before, in 1830, had it been higher. Mr Irwin reckons that the Tariff Act raised duties by 20%; deflation accounted for half as much again.

Smoot-Hawley did most harm by souring trade relations with other countries. The League of Nations, of which America was not a member, had talked of a "tariff truce"; the Tariff Act helped to undermine that idea. By September 1929 the Hoover administration had already noted protests from 23 trading partners at the prospect of higher tariffs. But the threat of retaliation was ignored: America's tariffs were America's business. The Congressional Record, notes Mr Irwin, contains 20 pages of debate on the duty on tomatoes but very little on the reaction from abroad.

A study by Judith McDonald, Anthony Patrick O'Brien and Colleen Callahan* examines the response of Canada, America's biggest trading partner. When Hoover was elected president, the Canadian prime minister, Mackenzie King, wrote in his diary that his victory would lead to "border warfare". King, who had cut tariffs in the early 1920s, warned the Americans that retaliation might follow. In May 1930, with higher American tariffs all but certain, he imposed extra duties on some American goods—and cut tariffs on imports from the rest of the British empire.

He promptly called a general election, believing he had done enough to satisfy Canadians' resentment. America, wrote the *New York Times*, was "consciously giving Canada inducements to turn to England for the goods which she has been buying from the United States." Canadians agreed. King's Liberals were crushed by the Conservatives, who favoured and enacted even higher tariffs.

All this, of course, is history. There are plenty of reasons to think that the terrible lesson of the 1930s will not have to be learnt again. Governments have reaffirmed their commitment to open trade and the World Trade Organisation (WTO). The complex patterns of cross-border commerce, with myriad stages of production spread over so many countries, would be enormously costly to pull apart.

And yet. Tariffs can be increased, even under the WTO. The use of anti-dumping is on the rise. Favours

offered to one industry (farming then; cars now?) can be hard to refuse to others. And the fact that politicians know something to be madness does not stop them doing it. They were told in 1930: 1,028 times over.

* "Trade Wars: Canada's Reaction to the Smoot-Hawley Tariff". Journal of Economic History, December 1997.

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Darwinism

Why we are, as we are

Dec 18th 2008
From The Economist print edition

As the 150th anniversary of the publication of "On The Origin of Species" approaches, the moment has come to ask how Darwin's insights can be used profitably by policymakers

Illustration by Noma Bar



WEALTH, according to H.L. Mencken, an American satirist of the last century, "is any income that is at least $100 more a year than the income of one's wife's sister's husband." Adjusted for inflation since 1949, that is not a bad definition. But why do those who are already well-off feel the need to out-earn other people? And why, contrariwise, is it so hard to abolish poverty?

America, Mencken's homeland, executes around 40 people a year for murder. Yet it still has a high murder rate. Why do people murder each other when they are almost always caught and may, in America at least, be killed themselves as a result?

Why, after 80 years of votes for women, and 40 years of the feminist revolution, do men still earn larger incomes? And why do so many people hate others merely for having different coloured skin?

Traditionally, the answers to such questions, and many others about modern life, have been sought in philosophy, sociology, even religion. But the answers that have come back are generally unsatisfying. They describe, rather than explain. They do not get to the nitty-gritty of what it truly is to be human. Policy based on them does not work. This is because they ignore the forces that made people what they are: the forces of evolution.

The reasons for that ignorance are complex. Philosophers have preached that there exists between man and beast an unbridgeable distinction. Sociologists have been seduced by Marxist ideas about the perfectibility of mankind. Theologians have feared that the very thought of evolution threatens divine

explanations of the world. Even fully paid-up members of the Enlightenment, people who would not for a moment deny humanity's simian ancestry, are often sceptical. They seem to believe, as Anne Campbell, a psychologist at Durham University, in England, elegantly puts it, that evolution stops at the neck: that human anatomy evolved, but human behaviour is culturally determined.

The corollary to this is the idea that with appropriate education, indoctrination, social conditioning or what have you, people can be made to behave in almost any way imaginable. The evidence, however, is that they cannot. The room for shaping their behaviour is actually quite limited. Unless that is realised, and the underlying biology of the behaviour to be shaped is properly understood, attempts to manipulate it are likely to fail. Unfortunately, even as the 150th anniversary of Darwin's masterwork, "On The Origin of Species", approaches (it was published in 1859) that fact has not been properly accepted. Time, then, to see what a Darwinian analysis has to offer the hard-pressed policymaker, and whether it can make a practical difference to outcomes.

Mencken's observation neatly explains two aspects of modern life. One is the open-endedness of economic growth. The other is that no matter how rich your country becomes, the poor you will always have with you. But what explains Mencken's observation?

For a Darwinian, life is about two things: survival and reproduction. Of the two, the second is the more significant. To put it crudely, the only Darwinian point of survival is reproduction. As a consequence, much of daily existence is about showing off, subtly or starkly, in ways that attract members of the opposite sex and intimidate those of the same sex. In humans—unlike, say, peafowl, where only the cocks have the flashy tails, or deer, where only the stags have the chunky antlers—both sexes engage in this. Men do it more than women, but you need look no further than Ascot race course on Gold Cup day to see that women do it too. Status and hierarchy matter. And in modern society, status is mediated by money.

Girls have always liked a rich man, of course. Darwinians used to think this was due to his ability to provide materially for their children. No doubt that is part of it. But the thinking among evolutionary biologists these days is that what is mainly going on is a competition for genes, not goods. High-status individuals are more likely to have genes that promote health and intelligence, and members of the opposite sex have been honed by evolution to respond accordingly. A high-status man will get more opportunities to mate. A high-status woman can be more choosy about whom she mates with.

Life is about survival and reproduction

For men, at least, this is demonstrably true. Evolutionary biologists are fond of quoting extreme examples to make the point, the most famous being Moulay Ismail the Bloodthirsty, a Moroccan ruler who fathered over 1,000 children. But kings have powers of coercion. Some better examples are provided by Joe Studwell, in his book "Asian Godfathers", which dissects the lives of businessmen. Stanley Ho, a veteran operator in Hong Kong and Macau, has 17 children by several women. Oei Tiong Ham, a tycoon who died in 1924, had 18 concubines and 42 children. The relationship holds good further down the social ladder. Danile Nettle and Thomas Pollet, of Newcastle University, recently showed that in Britain the number of children a man has fathered is, on average, related to his income, the spread of modern contraception notwithstanding.

Status, though, is always relative: it is linked to money because it drives the desire to make more of the stuff in order to outdo the competition. This is the ultimate engine of economic growth. Since status is a moving target, there is no such thing as enough money.

The relative nature of status explains the paradox observed in 1974 by an economist called Richard Easterlin that, while rich people are happier than poor people within a country, average happiness does not increase as that country gets richer. This has been disputed recently. But if it withstands scrutiny it means the free-market argument—that because economic growth makes everybody better off, it does not matter that some are more better off than others—does not stand up, at least if "better off" is measured in terms of happiness. What actually matters, Darwinism suggests, is that a free society allows people to rise through the hierarchy by their own efforts: the American dream, if you like.

Conversely, the Darwinian explanation of continued support for socialism—in the teeth of evidence that it results in low economic growth—is that even though making the rich poorer would not make the poor richer in financial terms, it would change the hierarchy in ways that people at the bottom would like. When researchers ask people whether they would rather be relatively richer than their peers even if that means they are absolutely worse off, the answer is yes. (Would you rather earn $100,000 when all your friends earn $50,000, or $150,000 when everybody else earns $300,000?) The reason socialism does not work in practice is that this is not a question that most people ask themselves. What they ask is how to earn $300,000 when all around them people are earning $50,000.

A Darwinian analysis does, however, support one argument frequently made by the left and pooh-poohed by the right. This is that poverty is relative. The starkest demonstration of this, discovered by Richard Wilkinson of Nottingham University, in England, is that once economic growth has lifted a country out of penury, its inhabitants are likely to live longer, healthier lives if there are not huge differences between their incomes. This means that poorer countries with low income-variation can outscore richer ones with high variation. It is also true, as was first demonstrated by Michael Marmot, of University College, London, that those at the bottom of social hierarchies have worse health than those at the top—even when all other variables are statistically eliminated, including the fact that those who are healthier are more likely to rise to the top in the first place.

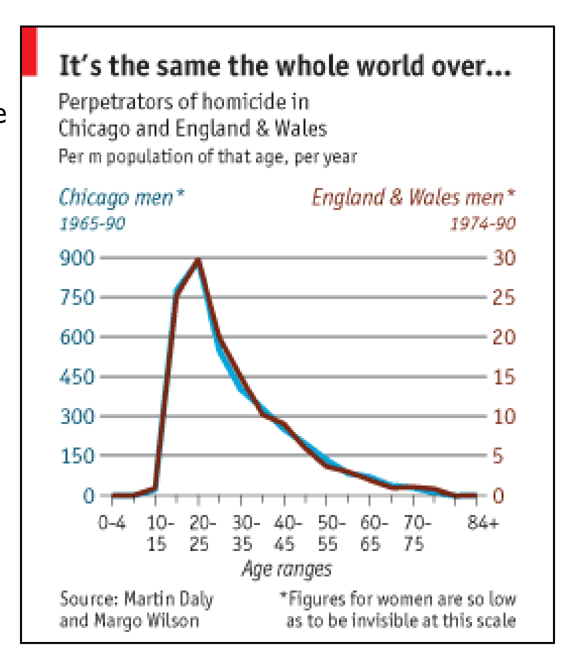
In the 1970s, when Dr Marmot made this observation, expert opinion predicted the opposite. Executives were expected to suffer worse stress than groundlings, and this was expected to show up as heart attacks, strokes and so forth. In fact, the opposite is true. It is the Darwinian failure of being at the bottom of the heap that is truly stressful and bad for the health. That, writ large, probably explains the mortality patterns of entire countries.

In this case, therefore, the Darwinian conclusion is that there is no right answer—or at least no Utopian one. Of course, it does not take a Darwinist to work out that any competition has losers. The illuminating point is that losing has a real cost, not just the absence of gain. With the stakes this high—early death for the failures and genetic continuity for the successes—it is hardly surprising that those at the bottom of the heap sometimes seek status, or at least "respect", in other ways. This is a point that should be taken seriously by policymakers. For those "other ways" are also explicable by Darwinism.

That crime is selfish is hardly news. But the idea that criminal behaviour is an evolved response to circumstances sounds shocking. It calls into question the moral explanation that crime is done by "bad people". Yet that explanation is itself susceptible to Darwinian analysis: evolution probably explains why certain behaviours are deemed worthy of punishment.

The study of the evolutionary roots of crime began with the work of Martin Daly and Margo Wilson, a married couple who work at McMaster University in Canada. They looked at what is usually regarded as the most serious crime of all, murder.

That murderers are usually young men is well known, but Dr Daly and Dr Wilson dug a bit deeper. They discovered that although the murder rate varies from place to place, the pattern does not. Plot the rate against the age of the perpetrator and the peak is the same (see chart). Moreover, the pattern of the victims is similar. They, too, are mostly young men. In the original study, 86% of the victims of male killers aged between 15 and 19 were also male. This is the clue as to what is going on. Most violence (and thus most murder, which is simply violence's most extreme expression) is a consequence of competition between young, unemployed, unmarried men. In the view of Darwinists, these men are either competing for women directly ("You looking at my girl, Jimmy?") or competing for status ("You dissing me, man?").



This is not to deny that crimes of violence are often crimes of poverty (for which read low status). But that is precisely what Darwinism would predict. There is no need to invoke the idea that people are "born criminal". All that is required is the evolution of enough behavioural flexibility to respond appropriately when violence is (or would have been, in the evolutionary past) an appropriate response.

Crime...

An evolutionary analysis explains many things about crime (and not just murder)—particularly why most criminals are males of low status. A woman will rarely have difficulty finding a mate, even if he does not measure up to all her lofty ideals. In the world of Moulay Ismail the Bloodthirsty, however, a low-status man may be cast on the reproductive scrap heap because there are no women available to him at all. Though the world in which humanity evolved was nowhere near as polygamous as Moulay Ismail's, neither did it resemble the modern one of monogamous marriage, which distributes women widely. In those

circumstances, if the alternative was reproductive failure, risking the consequences of violence may have been are worth the gamble—and instincts will have evolved accordingly.

For similar reasons, it is no surprise to Darwinists that those who rape strangers are also men of low status. Oddly, considering it is an act that might result in a child, the idea that rape is an evolved behaviour is even more controversial than the Darwinian explanation of murder. Randy Thornhill of the University of New Mexico, who proposed it on the basis of criminal data and by comparing people with other species, was excoriated by feminists who felt he was somehow excusing the crime. On the other hand, it has become a mantra among some feminists that all men are rapists, which sounds a lot like the opposite point of view: biological determinism. Insert the word "potential", however, and this claim is probably true. To a Darwinist, the most common form of forced mating, so-called date rape, which occurs in an already charged sexual environment, looks a lot like an adaptive response. Men who engage in it are likely to have more offspring than those who do not. If a genetic disposition for men to force their attentions on women in this way does exist, it would inevitably spread.

Sexual success, by contrast, tends to dampen criminal behaviour down. Getting married and having children—in other words, achieving at least part of his Darwinian ambition—often terminates a criminal's career. Again, that is a commonplace observation. However, it tends to be explained as "the calming influence of marriage", which is not really an explanation at all. "Ambition fulfilled" is a better one.

The murder of children, too, can be explained evolutionarily. On the face of things it makes no sense to kill the vessels carrying your genes into the next generation. And, indeed, that is not what usually happens. But sociologists failed to notice this. It was not until Dr Daly and Dr Wilson began researching the field that it was discovered that a child under five is many times more likely to die an unnatural death in a household with a stepfather present (whether or not that relationship has been formalised by law) than if only biological parents are there.

Illustration by Noma Bar

In this, humans follow a pattern that is widespread in mammals: male hostility to a female's offspring from previous matings. In some species, such as lions and langurs, this results in deliberate infanticide. In humans things not are always as brutal and explicit. But neglect and a low threshold of irritation at the demands of a dependent non-relative can have the same effect.

Intriguingly, though, if a genetic parent is the killer it is often the mother. Infanticidal mothers are usually young. A young mother has many years of potential reproduction ahead of her. If circumstances do not favour her at the time (perhaps the father has deserted her) the cost to her total reproductive output of bringing up a child may exceed the risk of killing it. Not surprisingly, maternal infanticide is mainly a crime of poor, single women.

Many people might sympathise with those driven to commit this particular form of homicide. But in general crimes such as murder and rape provoke a desire to punish the perpetrators, not to forgive them. That, too, is probably an evolved response—and it may well be a uniquely human one. No court sits in judgment over a drake who has raped a duck. A lioness may try to defend her cubs against infanticide, but if she fails she does not plan vengeance against the male who did it. Instead, she usually has sex with him. Yet ideas of revenge and punishment lie deep in the human psyche.

…and punishment

Economists were long puzzled, for example, by the routine outcome of a game in which one player divides a sum of money between himself and a competitor, who then decides whether the shares are fair. If the second player decides the shares are not fair, neither player gets anything.

What is curious about this game is that, in order to punish the first player for his selfishness, the second player has deliberately made himself worse off by not accepting the offer. Many evolutionary biologists feel that the sense of justice this illustrates, and the willingness of one player to punish the other, even at a cost to himself, are among the things that have allowed humans to become such a successful, collaborative species. In the small social world in which humans evolved, people dealt with the same neighbours over and over again. Punishing a cheat has desirable long-term consequences for the person

doing the punishing, as well as for the wider group. In future, the cheat will either not deal with him or will do so more honestly. Evolution will favour the development of emotions that make such reactions automatic.

What goes for cheating goes for other bad behaviour, up to and including the murder of relatives and friends. Moreover, if publicly observed, punishment sends the same message to those who might be considering a similar course of action.

It is therefore one of the marvels of civilisation that punishment and revenge have, for the most part, been institutionalised. But to be successful, the institutionalised punishment has to be seen as a proper outcome by the individuals who were harmed. Otherwise, they might mete out their own revenge. That may worry those who believe that reforming the criminal should be the main goal of sentencing policy. If people no longer believe that the punishment fits the crime, a Darwinian would predict that they will stop supporting the criminal-justice system.

Even deterrence, however, does not always work. On the face of things, capital punishment ought to be the ultimate deterrent. But it does not seem to be. Satoshi Kanazawa, an evolutionary psychologist at the London School of Economics, suggests that this is further evidence of the reproduction-related nature of murder. Since failure to reproduce is a Darwinian dead-end anyway, risking death to avoid that fate—or, rather, being impelled to do so in the heat of the moment by an evolved instinct—is not as stupid as it looks. Some sorts of murder might be discouraged by the threat of the noose or the needle. But not the most common sort: young man on young man over status and sex.

A woman’s place

Crime, then, is one field in which women are unequal with men. That does not bother feminists, but perhaps it should. For it might reflect a wider truth which those who believe that the sexes should not merely have equal rights but enjoy equal outcomes will find uncomfortable.

When outcomes are unequal in socially acceptable areas of behaviour, such as employment, it is often interpreted as a sign of discrimination. But people who draw this conclusion rarely consider that the discrimination in question might actually be being exercised by the supposedly disadvantaged women themselves.

A classic example is income. Women earn less than men. Or do they? In fact, younger women do not, or not much. A recent report by the Institute of Economic Affairs (IEA), a British think-tank, found that British women aged between 22 and 29 who were in full-time employment earned only 1% less than their male counterparts. This age group corresponds for many women to the period when they are single. Once they have found the best available mate, the calculation changes: a woman no longer needs to show off.

In that context, it is less of a surprise that older women are out-earned by their male contemporaries. One reason is that they now care less about the size of their earnings. Of the top 25 ideal employers, as chosen by women, the IEA found that 12 were in the public or voluntary sectors—areas where salaries for equivalent work tend to be lower than in the private sector, though job security is higher and job satisfaction is often believed to be greater. For men, only four employers were in this category. The other reason, of course, is that women usually look after the children. Indeed, the study by Dr Nettle and Dr Pollet which found that reproductive success correlates with men’s income, also points out that with women the correlation is inverted. But the IEA study also found that it is women themselves who are taking the decisions about child care. It reports that two-thirds of the women who had not already had a “career break”, as it is euphemistically known, planned to take one at some point in the future. Less than an eighth of men had similar aspirations. That, too, would be predicted by a Darwinist.

Although there is a strong argument for making working conditions more sympathetic to the needs of parents of both sexes, the underlying point is that many women—and certainly many women with children—do not care as much about striving ahead in their careers as men do. Men, the report found, are more motivated by pay and less by job satisfaction than women are. If managers, they are more likely to work long hours. They also take more risks—or, at least, are more frequently injured at work.

The consequence, as Len Shackleton, the IEA report’s main author, puts it, is that: “The widespread belief that the gender pay gap is a reflection of deep-rooted discrimination by employers is ill-informed and an unhelpful contribution to the debate. The pay gap is falling but is also a reflection of individuals’ lifestyle preferences. Government can’t regulate or legislate these away, and shouldn’t try to.” He failed to add,

however, that these preferences are often the result of biological differences between the sexes.

What goes for pay probably goes for career choice as well. At one extreme, it is foolish, as Kingsley Browne of Wayne State University, in Michigan, suggests, to expect equal outcomes in organisations like the armed forces. Not only are men stronger and more aggressive but, Mr Browne suggests, the psychology of both sexes has evolved to trust men (and not trust women) in combat, precisely because of this aggression and strength. At the other end of the scale, it is probably an opposite mixture of evolved aptitudes and attitudes that causes the domination by females of professions such as nursing.

This is not to say there can be no good female soldiers or male nurses. Patently, there can. But it is not clear evidence of discrimination that they are rarer than their counterparts of the opposite sex. A Darwinian analysis of the matter cannot say where the equilibrium would lie in a world free from discrimination. But it can say with reasonable confidence that this equilibrium will often not be 50/50.

Many may harrumph at such a Darwinian interpretation of feminism, and say that it is a circuitous route to a traditional destination. It isn't: not expecting an equal distribution of the sexes within every profession is not the same as saying that a woman's place is in the home. And having dared to question the assumptions of both feminists and their opponents, some evolutionary biologists are now hoping to turn conventional wisdom upside down in another area where civil rights meet long-standing prejudice. This is the vexed question of race.

Race to the finish

Racial difference is an area where modern Darwinists have feared, until recently, to tread. This is hardly surprising, given the topic's history. Many early evolutionary biologists (though not Darwin himself) thought that just as man was a risen ape, so white, European man was the zenith of humanity, and that people from other parts of the world were necessarily inferior.

The consequences of that have been terrible. It gave a veneer of intellectual respectability to the eugenic horrors which culminated in the Nazi death camps. Indeed, it is probably one of the roots of the "evolution stops at the neck" point of view. But evolutionary biology is now making amends. By overturning understanding of what race actually is, it may yet provide the tools that allow people of different backgrounds to live in reasonable harmony.

Its first observation is a bleak one. This is that racism, or at least xenophobia, is a deeply ingrained human characteristic. But its second observation is that, so far as can be determined, the traditional definition of race—the tendency of people living in different parts of the world to have different skin colour, hair colour and physiognomy—has no wider ramifications in areas such as intelligence. Racial prejudice, then, is just that: prejudice.

Revenge and punishment lie deep in the human psyche

What is being proposed instead, by another husband and wife team of Darwinists, Leda Cosmides and John Tooby of the University of California, Santa Barbara, is a theory of ethnicity that explains the mishmash of categories anthropologists have tried to shoehorn into the general class of "race". Are Jews and Sikhs, who are defined by religious exclusivity, races? Are Serbs and Croats, who share their religions with others, but not with each other, and whom no geneticist could tell apart? These examples, and similar ones, argue that race has no biological meaning. But it does. It is just not the traditional meaning.

Social psychologists have long observed that, on first meeting, people automatically classify each other in three ways: by sex, by age and by race. But Dr Cosmides and Dr Tooby pointed out that before long-distance transport existed, only two of those would have been relevant. People of different ages and sexes would meet; people of different races would not.

The two researchers argue that modern racial discrimination is an overstimulated response to what might be called an "alliance" detector in the human brain. In a world where the largest social unit is the tribe, clan or what-you-will of a few hundred people, your neighbours and your other allies will normally look a lot like you, and act similarly. However, it is known from the study of modern hunter-gatherers, and inferred from archaeological evidence about ancient ones, that neighbouring tribes are often hostile.

Though an individual might reasonably be expected to know many members of his tribe personally, he would probably not know them all. There would thus be a biological advantage in tribal branding, as it were. Potential allies would quickly identify what marked them out from others, and what marked others

out from them—and, because those differences would probably be small, the detector would need to be very sensitive.

In the past, such markers would often have been cultural, since local physical differences would have been minimal. A telling instance is recorded in the Bible:

Then said they unto him, Say now Shibboleth: and he said Sibboleth: for he could not frame to pronounce it right. Then they took him and slew him.

The questioners were the Gileadites. The slain, an Ephraimite. But no physical difference could distinguish the tribes, so the Gileadite ethnic-cleansers had to rely on linguistic tics.

In a world where a syllable can get you killed, having differently coloured skin is a pretty strong brand of identity. However, it is not a unique signal. Experiments that Dr Cosmides, Dr Tooby and their students have conducted in both America and Brazil (another racially mixed country) suggest it is surprisingly easy to rebrand even people of different skin colour by making other badges of allegiance more significant—as happens when sportsmen clothe themselves in coloured team shirts. Moreover, Andrew Penner of the University of California, Irvine, and Aliya Saperstein of the University of Oregon have shown that perception of a person’s race can actually change in the real world. Many people shift from being “white” to “black”, in both their own eyes and the eyes of others, in response to unemployment, impoverishment or imprisonment.

That is an uncomfortable reminder of the way group solidarity works in America. The hope this analysis brings, though, is that there is nothing particularly special about biologically based brands such as skin colour. If other brands of group membership can be strengthened, the traditional ones may diminish, even if they do not disappear completely. If this theory of race is correct (and more research is certainly needed), it indicates a strong prescription: policies that encourage groups to retain their identity within a society will cause trouble, but those that encourage cultural integration will smooth things over.

In practice, the history of that most racially mixed country of all, the United States, supports this idea. When integration has been encouraged, as with the descendants of the great flood of European immigrants in the late 19th and early 20th centuries, ethnic distinctions have vanished. When integration has been discouraged, as with the descendants of slaves liberated shortly before those European immigrants arrived, differences have been sharpened. Even in Britain, official policy seems to be shifting from “multiculturalism”, which celebrated diversity and thus encouraged distinction, to a deliberate attempt to forge a cultural consensus.

What the brand theory of ethnicity does not require, however, is that minorities submit to the majority’s definition of what the brands should be. All that is needed is for each generation to be encouraged to form its own identity from the widest range of materials possible.

Illustration by Noma Bar



A Darwinian analysis thus sheds light on a number of pressing questions. There are others. The rise of metabolic syndrome (obesity plus high blood-pressure equals diabetes plus heart disease) seems to Darwinists the consequence of people trying to sate appetites for sugar and fat that evolution put no brakes on because they were so rare in the natural world.

Pretending young adults are children so that they can be educated en masse in schools is another area

ripe for investigation. And the refusal of people to adhere to the patterns of behaviour prescribed for them by classical economics has already spun off a field called behavioural economics that often has Darwinian thinking at its roots.

No one is suggesting Darwinism has all the answers to social questions. Indeed, with some, such as the role of hierarchies, it suggests there is no definitive answer at all—itself an important conclusion. What is extraordinary, though, is how rarely an evolutionary analysis is part of the process of policymaking. To draw an analogy, it is like trying to fix a car without properly understanding how it works: not impossible, but as likely as not to result in a breakdown or a crash. Perhaps, after a century and a half, it is time not just to recognise but also to understand that human beings are evolved creatures. To know thyself is, after all, the beginning of wisdom.

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Ecstasy

Agony and ecstasy

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Ecstasy may be good for those who can't get over something truly horrible

Craig Ward



"I'VE been shot in the leg. I've been beat up. But that's pretty minor," says a 41-year-old American security contractor who spent four years in Iraq. "But when you get a vehicle blown out from under you and ambushed by six or eight al-Qaedas, it does tend to affect one a little bit."

With a broken back, two broken feet and neurological damage, the man, who asked that his name not be used, spent the next three months in hospitals in Iraq, Germany and America. But though he was physically on the mend by the start of this year, he found himself incapacitated. "I was having nightmares right off the bat," he recalls. "I couldn't do anything. Mostly, I'd just retreat to a room and not leave."

Post Traumatic Stress Disorder, or PTSD, is the persistence of debilitating psychological symptoms. It can include flashbacks and nightmares, increased arousal in the form of insomnia, anger and an inability to concentrate, and impaired personal relationships. Although lasting psychological damage from horrific experiences has been recognised since time immemorial, it is only since 1980, when veterans were still experiencing stress from the Vietnam war, that PTSD has been a formal psychiatric diagnosis.

By 2005 72,000 American veterans were receiving disability payments for PTSD. A study two years later estimated that 12% of American veterans from the wars in Iraq and Afghanistan suffer from PTSD. Thus far, 1.8m Americans have been deployed in those two theatres, implying 216,000 eventual cases.

Yet most PTSD sufferers are not drawn from the ranks of those for whom trauma is an occupational hazard: 5% of American men suffer from PTSD at some period in their lives. For American women, the rate is double that, mostly from exposure to such crimes as domestic violence and sexual abuse. Two in five rape victims are diagnosable with PTSD six months after the attack. "It can go on for ever", says Kathleen Brady, a professor of psychiatry at the Medical University of South Carolina who studies the disorder, "but even after 30 years, PTSD is treatable."

Treatment usually includes drugs and antidepressants such as Zoloft, sometimes combined with psychotherapy. "There is a lot of evidence supporting exposure-based therapy", says Dr Brady, "which means re-living the events in a safe setting so patients can separate the inappropriate effect from the trauma." Yet in at least a quarter of cases chronic PTSD is resistant to all treatment.

Gail Westerfield, a writer who lives in South Carolina, was sexually abused by a neighbour when she was a child, and later raped by an acquaintance when a university student. She suffered a range of symptoms including memory problems, bouts of depression, crying fits and tremors.

She was diagnosed with PTSD a decade ago when she was in her 30s. But she found this knowledge cold comfort. "I was probably on half a dozen different kinds of antidepressants over the years", she says, "and they never worked for me. I've had this my whole life, pretty much."

So the results of a clinical trial recently announced by Michael Mithoefer, a psychiatrist in Charleston, South Carolina, are encouraging. Twenty patients with PTSD who had resisted standard treatments—including both Ms Westerfield and the security contractor—were given an experimental drug in combination with psychotherapy. After just two sessions all of them reported dramatic improvement. The compound, methylenedioxymethamphetamine, or MDMA, is not new. Known as Ecstasy, it is illegal nearly everywhere.

Dr Mithoefer's study is part of a broader resumption of research into the therapeutic uses of psychoactive compounds. Scientists in North America, Europe and Israel are studying the use of MDMA, LSD, hallucinogenic mushrooms, marijuana and other banned psychoactive substances in treating conditions such as anxiety, cluster headaches, addiction and obsessive-compulsive disorder. They are supported by private funds from a handful of organisations: the Beckley Foundation in Britain; the Heffter Research Institute and the Multidisciplinary Association for Psychedelic Studies (MAPS) in America.

This avenue of research—as opposed to research into the damage done by recreational drug use—came to a halt in the 1970s when drug prohibition became politically popular first in America and then in the rest of the world. Though the "war on drugs" continues, the approach is gradually becoming less dogmatic and more pragmatic. Even so, research into therapeutic uses of banned drugs is fraught with political considerations, often with bizarre results. For instance, though medical marijuana is now recognised in many parts of the world—in California more than 20,000 people are registered to use it—there are few studies into its benefits.

Fun has its uses

MDMA was first synthesised almost a century ago but was little noticed until the 1960s when young American chemists began to ingest it. Alexander Shulgin, a chemist at Dow Chemical in California who had invented Zectran, the first biodegradable insecticide, had been experimenting—in every sense—with mescaline and its chemical relatives. Then one of his students suggested that he try MDMA. "By golly", he recalls, "she was absolutely right: this was an interesting compound."

Mr Shulgin left Dow to pursue psychoactive chemistry full-time. Over a couple of decades he synthesised hundreds of chemicals, all of which he tried first on himself and a small group of volunteers. One of his collaborators was his wife, Ann. In the late 1970s the Shulgins introduced MDMA to Leo Zeff, a Californian psychotherapist who had developed LSD therapies in the 1960s when that drug was still legal. Dr Zeff was so impressed that he postponed retirement and became an enthusiastic proponent of the drug (which he called Adam), introducing it to hundreds of other therapists in America and Europe.

But in the 1980s MDMA, which at the time was still unregulated, escaped its semi-underground psychotherapeutic milieu and began to be taken by young people for the sheer fun of it. In a panic, America's Drug Enforcement Agency (DEA), unaware of the therapeutic MDMA network, made an emergency classification in 1985 that placed MDMA in Schedule I—the most restrictive category for drugs with "a high potential for abuse" and "no currently accepted medical use".

Schedule I also includes marijuana, LSD, psilocybin, mescaline and heroin (though rules vary widely: heroin, for example, is available by prescription in Britain and some other countries). Cocaine, amphetamines, opium, morphine and others are in Schedule II and can be prescribed by doctors under DEA supervision. Although 500,000 doses of MDMA had by this point been used in therapeutic settings, the compound was thereafter banned worldwide.

Some therapists went underground, continuing MDMA treatment illegally, using illicit supplies. "It's a very simple compound to make," remarks Mr Shulgin.

Ironically, once it became illegal, MDMA's recreational use exploded. The UN estimates that at least 9m people—compared with 12m heroin and 16m cocaine users—consume round about 100 tonnes of MDMA and related compounds worldwide each year. The criminal nature of the business makes it difficult to assess the dosage or purity of the MDMA being consumed and it can have lethal effects. But millions of people, rolling about on fake fur pillows or waving glowsticks to electronic music, attest to feeling good. "The first time I ever did it was literally the first time in my life that I felt good in my body," says Ms Westerfield, who took MDMA recreationally in the 1980s (half the study participants had swallowed the drug occasionally in the past).

In 1986 Rick Doblin, one of Dr Zeff's students, founded MAPS with the goal of ushering MDMA through the formal drug-approval process of America's Food and Drug Administration (FDA) and so bringing about its rescheduling. Drug approval often takes big pharmaceutical firms a dozen years at an average cost exceeding $1 billion. But Mr Doblin, then a student, had time and enthusiasm on his side.

"Our whole approach is based on the idea that science matters at the FDA," he says. No studies had been performed on the effects of banned psychoactive drugs on humans since 1971 (though a thaw came in 1990 with a study to assess the relationship between schizophrenia and dimethyltryptamine or DMT, a potent hallucinogen that occurs naturally in the brain). Mr Doblin explains that since the FDA insists that psychedelics should be treated like any other drug, "we had to start with a Phase I safety study, where the drug is first used on humans—even though millions of people had taken MDMA by then." The study got going in 1992 at the University of California, Los Angeles.

The results were positive but by the mid-1990s, when the study was complete, MDMA had become even more controversial. It was not until 2000, when Mr Doblin met Dr Mithoefer, another of Dr Zeff's former students, that the opportunity arose to propose a Phase II study on the efficacy of MDMA in treating PTSD. Treatments began in 2004.

Dr Mithoefer's Phase II research, which used MDMA from the only legal source—a chemist at Purdue University licensed by the DEA to distribute controlled quantities from a supply synthesised in 1985—is directly descended from the first generation of LSD psychotherapy. Subjects were given MDMA while attended by Dr Mithoefer and his wife, a psychiatric nurse. They rested on a futon, listened to music and were encouraged to revisit their trauma.

"I remember feeling incredibly safe and very motivated," says Ms Westerfield of her first session. The security contractor from Iraq concurs. "It helped me put the pieces of the puzzle together," he says. "I was blown 15 feet through the air in a vehicle, and I forgot the ride upwards. It made me remember it."

"I was blown 15 feet through the air, and forgot the ride upwards"

The patients who received MDMA showed statistically significant improvement of their PTSD symptoms compared with those who received the same day-long therapy sessions with an inactive placebo. "All the major approaches involve revisiting the trauma in therapy", says Dr Mithoefer, "but patients may be overwhelmed and retraumatised." He believes the fear and defensiveness that characterise PTSD are obstacles to treatment, and that it is MDMA's attenuation of these emotions that permits concurrent psychotherapy to be effective. He will publish the study shortly.

Several additional Phase II studies organised by MAPS are about to start in Israel, Switzerland and Canada. A Phase III trial, in which the methodology is extended to many more therapists and several hundred patients, is still more than two years away. But eventually, if two Phase III studies are successful, the next step would be rescheduling MDMA. Dr Mithoefer is cautious, suggesting that looking that far ahead is premature. "There's reason to think this may be an exciting new treatment at some point," he says. "But it's a long way to proving it in larger trials."

"We don't have failures", says Mr Doblin, "because we're working with drugs that have been tested in the underground, and work." Government research into the harmful effects of these drugs has, curiously, helped his cause: "There are over 3,000 papers on MDMA that have cost more than $200m to produce,"

he says. He estimates that, thanks to these bodies of formal and informal knowledge, MAPS can take MDMA through the approval process for only about $10m.

While the bureaucracy rolls on, a few people are watching the results with personal interest—and impatience. “There are other things that I would still like to work on,” says Ms Westerfield, whose last MDMA-assisted therapeutic session was four years ago. “That’s why I hope it gets approved sooner rather than later.”

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Cookbooks

Pluck a flamingo

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What cookbooks really teach us





NIGEL SLATER dislikes recipes. In his cookbook "Appetite" he compares them to a straitjacket and a pair of too-tight cycling shorts. There is, he says, an enormous difference between following instructions—including his own—and learning how to cook. Mr Slater admits that his heart sinks when somebody praises a recipe because it always works. "A recipe must work? Surely there is more to it than that."

Indeed there is. If the only purpose of cookbooks were to teach people how to create decent meals, they would take up no more space in the average home than do baby books. Instead, the shelves bend under the weight of Delia, Jamie and Nigella (or, in America, Julia, Martha and Rachael). Even a medium-sized bookshop contains many more recipes than one person could hope to cook in a lifetime. The cookbook section in the Los Angeles Public Library uses 1,200 feet (366 metres) of space.

Although the recipes in one book are often similar to those in another, their presentation varies wildly. There are Lutheran cookbooks, Wiccan cookbooks, feminist vegetarian cookbooks ("The Political Palate") and satirical cookbooks. There are instructions on cooking the food that Jane Austen, Sherlock Holmes and Thomas Jefferson might have eaten. Cookbooks have been written by French prisoners, the pop singer Tom Jones, the astrologer Nostradamus and the winners of the Miss America competition.

The reason for this profusion is that cookbooks promise to effect a kind of domestic alchemy. Although seemingly straightforward, they hold out the hope of liberation from a routine of leftover chicken and from children who refuse to eat food of any colour except white. To follow their instructions—or, as Mr Slater would prefer, to be inspired by them—is to turn a mundane task into an engaging, romantic process. Cookbooks also provide an opportunity to delve into distant cultures without having to turn up early at the airport or read subtitles.

The first Western cookbook appeared a little more than 1,600 years ago. "De re coquinara" (concerning cookery) is attributed to a Roman gourmet named Apicius who, legend has it, poisoned himself upon

learning that he could no longer afford to eat fancy food. It is probably a mishmash of Roman and Greek recipes, some or all of them drawn from manuscripts that have since been lost. The editor was careless, allowing several duplicated recipes to sneak in. Yet Apicius's book set the tone of cookery advice in Europe for more than a thousand years.

It has a decadent, aristocratic flavour. There are recipes for ostrich and flamingo, befitting the sweep of the Roman Empire. Apicius instructs cooks to add honey to almost everything, including lobster. He teaches them how to cook one dish so that it resembles another and how to disguise bad food. One recipe explains that stale birds should be cooked in a sauce of pepper, lovage, thyme, mint, hazelnuts, dates, honey, vinegar, liquamen (fish sauce), wine and mustard. Through that concoction it would be impossible to detect a stale smell, or indeed any smell at all.

As a cookbook, though, "De re coquinara" is unsatisfactory. Its instructions are basic, often more so than the flour-dusted notes that many modern cooks keep stuffed into the pages of a favourite book. A recipe for nut custard reads, in full: "Toast pine-kernels and chopped nuts, pound with honey, pepper, liquamen, milk and eggs. A little oil." Joseph Vehling, a chef who translated Apicius in the 1930s, reckoned the author had been deliberately obscure, lest his secrets leak out.

A more likely reason is that Apicius's recipes were written by and for professional cooks, who could decipher their shorthand. Western cookbooks remained vague for hundreds of years. "The Forme of Curye", a 14th-century English manuscript, is full of instructions to "smyte" fish "in pecys" and "do hem in a panne". There was no order to cookbooks: a cake recipe might be followed by a mutton one. But then, they were not written for careful study. Before the 19th century few educated people cooked for themselves. The wealthiest employed literate chefs; others presumably read recipes to their servants. Such cooks would have been capable of creating dishes from the vaguest of instructions.

The invention of printing, which might have been expected to lead to greater clarity, initially had the opposite effect. As words acquired commercial value, plagiarism exploded. A book by an Italian chef Maestro Martino, which explained how to concoct spectacular dishes like flaming peacock and pie with live birds, was copied and translated into Latin, German, English and French. Recipes were distorted through reproduction, as in a game of Chinese whispers. A recipe for boiled capon in "The Good Huswives Jewell", printed in 1596, advised the cook to add three or four dates. By 1653, when the recipe was pinched by the author of "A Book of Fruits & Flowers", the cook was told to set the dish aside for three or four days.

The dominant note in Renaissance cookbooks was order. Books combined recipes and household advice, on the assumption that a well-made dish, a well-ordered larder and well-disciplined children were equally important in God's eyes. The 16th-century Russian "Domostroi" contained advice on whipping servants as well as cooking turnips. A book published on the eve of the English civil war referred to the master of the house as the "Soveraigne".

Advice on whipping servants as well as cooking turnips

Cookbooks were thus a bulwark against the tumult of the times. They hardly seem to have been affected by the Reformation, the Thirty Years War, the English civil war or the revolutions in America and France. One French book endured the tumultuous 19th century simply by changing its title from "Le Cuisinier Imperial" to "Le Cuisinier Royal", then to "Le Cuisinier National" and back again to "Le Cuisinier Imperial" as the political winds changed. But then, revolutionaries tend not to go in for cookbooks. They seem to believe women have more important things to do than slave over a stove.

The rise of measurement

The great revolution in cooking advice was launched in one of the world's least revolutionary nations. In the 1850s Isabella Beeton, aged 23, began writing a series of supplements to the *Englishwoman's Domestic Magazine*, which was published by her husband. Like earlier cookery writers she plagiarised freely, lifting not just recipes but philosophical observations from other books. If Beeton's recipes were not wholly novel, though, the way in which she presented them certainly was.

Every recipe in "The Book of Household Management" opens with a list of ingredients, specifying quantities even of salt. Beeton mentions how substantial the result will be: "sufficient for 7 or 8 persons"; "sufficient for a small dish". She explains when the chief ingredients are most likely to be in season, how long the dish will take to prepare and even how much it is likely to cost. At the end of her book there is an "analytical index" of ingredients.

Earlier cookbook writers had experimented with some of these innovations, but none had combined them so rigorously. Beeton's precise, systematic recipes were well suited to her times. Two centuries earlier, knowledge of rural ways had been so widespread that one writer could advise cooks to heat water until it was a little hotter than milk comes from a cow. By the 1850s Britain was fast industrialising. The growing urban middle class needed details, and Beeton provided them in full.

Within a few years Beeton's methods had spread widely. In 1861 Elena Molokhovets published the similarly practical "A Gift to Young Housewives", which remained popular in Russia for half a century. Molokhovets wrote for grander households than Beeton, although ones that were perhaps more constrained than in the past: 1861 also saw the abolition of serfdom. During the Soviet era the book came to symbolise pre-revolutionary plenty—a kind of road map to a lost world. Exiles in France and America kept it in print.

In France, cookbooks were fast becoming even more systematic. Compared with Britain, France had produced few books written for the ordinary householder by the end of the 19th century (and one of those was written by Alexis Soyer, who had decamped to London to cook for the Reform club). The most celebrated French cookbooks were written by superstar chefs who had a clear sense of codifying a unified haute cuisine. In 1902 Auguste Escoffier succeeded in this task. The 5,000 recipes in his "Le Guide Culinaire" might as well have been written in stone, given the book's reputation among French chefs.

What Escoffier did for haute cuisine, Fannie Farmer did for American home cooking. Head of the Boston Cooking School, she not only synthesised American cuisine; she elevated it to the status of science. "Progress in civilisation has been accompanied by progress in cookery," she breezily announced, before launching into a collection of recipes that occasionally resembles a book of chemistry experiments. Farmer provided a recipe for "hygienic soup" and listed the precise quantities of fat, protein, minerals and water to be found in various cuts of meat.

Farmer was occasionally finicky. She explained that currants should be picked between June 28th and July 3rd, but not when it is raining. And she had some odd views, believing fish to be bad for the brain, for instance. But in the main her book is reassuringly authoritative. Its recipes are short, with no unnecessary chat and no unnecessary spices. Farmer wrote for ordinary middle-class families, addressing herself to "the young housekeeper" and giving advice on economising.

During the second world war the nutritionists took over. Margaret Pearson, who wrote "Cookery Under Rations" in 1941, praised vegetables and informed her (probably rather cross) readers that the scarcity of just about everything else was not such bad a thing. "Elaborate sauces are out of the question in these days of economy," she declared, although one rather suspects that Pearson disapproved of elaborate sauces even before rationing. Typical of the book is a recipe for "brown rice", which involves nothing more than rice, Marmite, dripping, onions, stock or water, pepper and salt.

Mary Evans



Pearson conceded that rationing was likely to tighten, rendering even some of her sparse recipes impossible. She was right about that. By 1944 Irene Veal was advising women how to cook with dried eggs or even with no eggs at all. Her recipe for mayonnaise is one of the most heartbreaking passages ever written in English:

"Melt 1oz of margarine in ½ teacup milk, and when the mixture is warm put through a cream machine—the five shilling kind which many of us bought before the war and still, I expect, possess. In about 2 or 3

hours' time add very gently to the cream 1 teaspoon made mustard and 1 tablespoon each salad oil and vinegar. Beat well and serve. If the oil is not available, it does not greatly matter…"

In that brief aside "I expect" is summed up the misery of wartime cooking.

Like rationing, this dire, utilitarian approach to food could persist only for so long. By the late 1940s Britons were ready for something more exotic. The answer to their wishes was a peculiar volume by a virtually unknown writer. Two books can be said to have launched revolutions in cooking advice. Beeton's "The Book of Household Management" is certainly one. The other is "Mediterranean Food" by Elizabeth David.

David's book opens by evoking the gruesome whistling sound emitted by sheep's lungs frying in oil. It proceeds like a combination of cookbook and travelogue. David quoted other writers as freely as Beeton had done, although unlike Beeton she acknowledged her sources. In some ways "Mediterranean Food" recalled even older cookbooks. David's discussion of *raito*, a Provençal dish, could have been written by Apicius: "It is a ragout made of onions, tomatoes, garlic, pounded walnuts, thyme, rosemary, fennel, parsley, bay leaves, red wine, capers and black olives, all simmered in olive oil. In this sauce either dried cod or eels are cooked."

David's book opens by evoking the gruesome whistling sound emitted by sheep's lungs frying in oil

The smells and noises that filled David's books were not mere decoration for her recipes. They were the point of her books. When she began to write, shortly after the war had ended, it was hard to get hold of cream, let alone capers. She understood this, acknowledging in a later edition of one of her books that "even if people could not very often make the dishes here described, it was stimulating to think about them." David's books were not so much cooking manuals as guides to the kind of food people might well wish to eat.

The American culinary cognoscenti received "Mediterranean Food" just as rapturously as British readers. But David failed to conquer the American kitchen. Cooks who were curious about European food plumped instead for a woman whose first book opened with an implicit rebuke to the British writer: "We have purposely omitted cobwebbed bottles, the patron in his white cap bustling among his sauces, anecdotes about charming little restaurants with gleaming napery, and so forth."

As Julia Child knew, Americans had no need to dream. The nation had endured much less severe food shortages than Britain and emerged from the war as the world's great power. Child's breezy, confident air, which she maintained even in the midst of complex recipes like fish mousse and chicken livers in aspic, was much better suited to the prevailing mood. Child rejoiced in inventions like frozen spinach and declared that good meals could be created by anyone who had access to a supermarket. America can do anything, she implied—even French food.

This cultural divide persists. American cookbooks still tend towards the plain and encyclopedic, while British cookbooks have become increasingly conversational and evocative. As a result, each country has its own household names. Few Americans have heard of Jane Grigson, Nigella Lawson or Delia Smith; equally few Britons have heard of Julia Child or Craig Claiborne. If Britons have heard of Martha Stewart it is more for her dodgy financial dealings than for her gingerbread.

Britain and America are the two great cookbook-writing nations, which is not the same as being nations of great cooks. It is precisely because neither country can boast a coherent, admirable, traditional cuisine that cooks have such need of guidance and distraction. Nations with grand cooking traditions produce fewer, simpler cookbooks. Yet things are changing.

France still churns out cookbooks that resemble textbooks, both in weight and charm. But the rise of women's paid work has forced publishers to adapt. Modern French cookbooks have titles like "La Bonne Cuisine de nos Grand-Mères". They contain homely recipes that women once presumably knew by heart but have now forgotten because they spend too much time staring at spreadsheets. In an even greater concession to contemporary mores, French bookshops carry works written by Jamie Oliver, a chipper television chef from Britain, of all places.

Cookbooks are becoming more common in China, although they are hardly more helpful to the inexperienced. Few dishes, whether native or foreign, are believed to be so complex that they cannot be reduced to three or four simple steps. One guide to French food zips through a recipe for baked sea bream with almonds in just 129 Chinese characters. The subtle, tricky things about Chinese cooking—how to balance strong flavours, how to fry vegetables so they are cooked but still crisp—are assumed to

be so well understood that they require no explanation.

Indian recipes assume a similarly deep knowledge of cooking, although they splendidly combine brevity with the sort of florid touches that David admired. Books by K.M. Mathew, Kerala's premier cookbook-writer, are full of injunctions such as: "fry it little by little" and "do not use your hand to take flour". Indian cookbooks also assume an attitude to ingredients that was lost long ago in Europe and America. As recently as 1992 a Goan cookbook instructed its readers: "Cut live chicken and take out 5 tbsp fresh blood."

Indian cookbooks are frankly written for women. In 1978 a cookbook sponsored by Dalda, a cooking oil, had a specific woman in mind: "Once you are married you are faced with the prospect of being cook, companion and wife to your husband—and competing with memories of his mother's home cooking."

Although more recent cookbooks do not put it so starkly, they hint at the same alarming scenario. The promise of dramatic improvement in domestic relations, implicit in nearly all cookbooks, is made clear in India.

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Start-ups in India

A suitable business

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Middle-class India now celebrates entrepreneurial success. Can it forgive failure?

SammaaN Foundation



IRFAN ALAM, a 27-year-old from the Indian state of Bihar, remembers clearly when he first felt the thirst for entrepreneurship. Sitting in the back of a cycle-rickshaw on a parched summer's day in his hometown of Begusarai, he asked his rickshaw-puller for a drink of water. He points out that India's rickshaw-pullers earn only a pittance after paying the rent on their vehicles. Perhaps, he thought, they could make a bit extra by selling drinks, newspapers or even mobile-phone cards to their passengers. And since the average rickshaw covers 10km (six miles) a day, perhaps it could also courier goods around town and advertise them to passers-by.

These ideas evolved into Sammaan (which means dignity), one of 30 Indian enterprises shortlisted in a competition to find the country's "hottest" start-up. The contest, which attracted over 500 nominees, is run by the National Entrepreneurship Network (NEN), which promotes the spirit of enterprise on India's campuses, and the Tata group, an Indian conglomerate, which was a hot start-up 140 years ago. The competition's five winners, decided by a mixture of online voting and expert judgment, will emerge in late December.

More than 75% of the nominees are, like Mr Alam (pictured above), first-generation entrepreneurs who do not hail from business families. Two-thirds of the final 30 have masters degrees. In short, they have plenty of options. Their enthusiasm for entrepreneurship represents a growing willingness on the part of highly educated Indians to turn their backs on careers in brand-name companies and strike out on their own. "In my early years, your business card was very important," says Kanwal Singh, one of the competition's advisers, who has carried the cards of Hindustan Lever and Intel in his time. He now works for Helion Ventures, an Indian venture-capital fund, which has seen some 1,500 proposals in the past three years. Inside the NEN, "we call it a revolution in middle-class aspirations," says Laura Parkin, the network's executive director.

India, of course, has a deep entrepreneurial tradition, exemplified by merchant communities such as the Marwari baniyas, who have made money wherever they go, trusting each other and bargaining hard with everyone else. But the new generation of entrepreneurs follows a different creed. Its members are inspired by figures like N.R. Narayana Murthy and Nandan Nilekani, two of the founders of Infosys in 1981. According to Vir Sanghvi, a journalist, they wanted to create an "un-Marwari" firm based on merit and professionalism, not kith and kin.

One Infosys employee, Rajesh Varrier, quit in 2006 to start his own firm, activecubes, which also made the Tata NEN shortlist. When Mr Nilekani asked Mr Varrier why he thought he could make it alone, he replied: “Because of you.” For India’s younger entrepreneurs, even Mr Nilekani is now a distant, hallowed figure. They draw inspiration from more recent triumphs, such as Educomp, which sells multimedia materials to schools, and Naukri.com, an online job market.

Given these role models, it is not surprising that about a third of the nominees are in computing, and most of the rest are in services, such as entertainment, human resources and education. The new breed of entrepreneur still considers manufacturing “dirty”, says Rakesh Basant of the Indian Institute of Management in Ahmedabad, not least because it entails greater interaction with government.

Mr Alam’s venture is a partial exception: it builds customised rickshaws, using fibreglass for well-paved tourist towns and sturdier iron for the bone-jarring streets of Bihar’s capital, Patna. He was able to offer these tangible assets as security for a bank loan. But outside finance is unusual: 87% of the nominees began with money from friends, family or their own pockets.

Many American companies start the same way, of course. But they quickly turn to “angel investors”, mostly rich individuals, who invested $26 billion in over 57,000 young enterprises in 2007, according to the Center for Venture Research at the University of New Hampshire. In India, says Mr Basant, investors will rarely consider amounts less than 5m rupees ($100,000)—it is not worth the hassle—and they prefer to invest twice that. Even venture capitalists, who plough other people’s money into newish firms, are still quite novel in India. They did just 108 deals (of an average size of $6.3m) in the first nine months of 2008, according to Venture Intelligence, which tracks their activities.

Mr Singh’s fund invests in only 1-2% of the proposals he sees, rejecting many firms because their management lacks experience. He prefers managers to have five to seven years of seasoning, although he concedes that determined entrepreneurs, prepared for a long haul, can learn as they grow. Ms Parkin’s network also encourages young graduates to work at someone else’s start-up before creating their own. She notes that India’s leading business schools are now quite happy to let start-ups hire on campus. This is, she says, one sign of entrepreneurship’s growing prestige, because a school’s reputation rests on where its alumni work and how much they earn.

Ms Parkin grew up in Hong Kong, where many people think of themselves as “tomorrow’s millionaires”. She sees the same “essential optimism” in India. But the true test of an entrepreneurial culture is not how it celebrates success, but whether it forgives failure. India is moving in that direction, says Mr Singh, but it is not there yet. “I’m not sure if the entrepreneur is willing to accept it either,” he says. Instead of walking away, many businessmen hang on, feeling they have to prove themselves.

Even successful entrepreneurs can cling on too long. Having reached a certain size, their companies would often benefit from bringing in professional managers. But in India, the proud founder will often resist. He feels “this is his baby and he has to run it,” says Mr Singh. India’s determined, optimistic entrepreneurs need to know when to cut their losses and when to pocket their gains. “In both instances”, says Mr Singh, “you need to learn how to let go.”

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The Siemens scandal

Bavarian baksheesh

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The stench of bribery at Siemens signals a wider rot in Europe

WHEN Siemens, Europe's biggest engineering firm, adopted the slogan "Be inspired" in the mid-1990s, bribery was not what it had in mind. But no one can accuse its managers of lacking inspiration in devising ways to pass generous backhanders to corrupt officials and politicians around the world. On December 15th Siemens pleaded guilty to charges of bribery and corruption and agreed to pay fines of $800m in America and €395m ($540m) in Germany, on top of an earlier €201m.

There is something almost touching about the candour and trust with which Siemens went about a very dirty business. Take the three "cash desks" it set up in its offices, to which employees could bring empty suitcases to be filled with cash. As much as €1m could be withdrawn at a time to win contracts for Siemens's telecoms-equipment division, according to America's Department of Justice (DoJ).

Surprisingly, considering their crooked purpose, the cash desks seem to have operated on an honour system. Few questions were asked, no documents were required and managers who asked for money were allowed to approve their own requests. Until 1999 Siemens openly claimed tax deductions for bribes, many of which were listed in its accounts as "useful expenditure". Between 2001 and 2004 some $67m was merrily carted off in suitcases. "There was no complex financial structuring such as you would find among drug smugglers or money launderers," says Mark Pieth, chairman of the working group on bribery at the OECD. "People felt confident that they were doing nothing wrong."

Even when they knew they were doing wrong, they could not break the habit. Illicit payments continued for years after Germany outlawed the bribery of foreign officials in 1999 and after Siemens listed its shares on the New York Stock Exchange in 2001, which made it subject to America's tough anti-bribery laws. Instead of counting money in the office, the firm put cash in special accounts, kept off its books, from which nefarious payments could be made. Much of the dirty work was farmed out. As Siemens half-heartedly clamped down on corruption, managers took ever more eccentric steps to avoid getting caught. When authorising payments, many of them signed on removable sticky notes.

The sums are staggering. About $805m was paid to foreign officials to help Siemens win contracts over about six years after the firm's American listing, according to the DoJ. And the brazenness of the firm's bribe-paying points to a rotten corporate culture pervasive across Germany at the time. "The great majority of companies operating in the international market were well aware that German law—and the law of most OECD countries—allowed foreign bribery and even subsidised this," says Peter Eigen, the founder of Transparency International, an anti-corruption group.

That, at least, has changed. Mr Pieth thinks about half of the 30 biggest German and French firms are being investigated or prosecuted for bribing foreign officials. And Germany has steadily improved its rank in Transparency's "Bribe Payers Index", moving from ninth-least corrupt in 1999 to fifth in 2008. Yet the Siemens affair also shows how far Europe still lags behind America in prosecuting bribery. Few close to the case think it would have progressed nearly as far had Siemens not invited in Debevoise & Plimpton, a New York law firm, in the hope of winning leniency from American prosecutors. The lawyers pored over its books and interviewed staff in the largest private inquiry of its kind (and, at €204m, probably the costliest too).

Ellen Podgor, an expert in white-collar crime at Stetson University in St Petersburg, Florida, reckons that Siemens confessed all not to minimise the fine it had to pay but to avoid being barred from business with the American government. "The amount of money being paid is not the crucial factor," she says. "The crucial factor is not being doomed." If only European prosecutors could inspire such dread.

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America's car industry

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AP



A proposed government bail-out of two of America’s Big Three carmakers, General Motors and Chrysler, was thrown into confusion after Senate Republicans unexpectedly rejected a $14 billion loan, approved by the House of Representatives and the White House, on December 11th. The following day George Bush said he was prepared to use funds from the Troubled Asset Relief Programme, set up to rescue the financial industry, to keep the carmakers going into 2009. These funds can be dispensed at the discretion of the Treasury. But after days of negotiations it remained unclear how and when this might happen, and what conditions might be attached.

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Video games

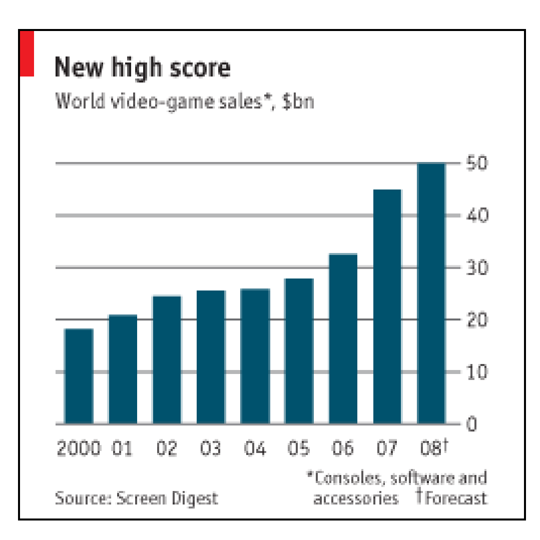
Play on

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Video games have proved to be recession-proof—so far, at least

IS IT any surprise that an industry that enables its customers to escape from reality into elaborate fantasy worlds is thriving in today's gloomy economic climate? As other industries collapse, sales of video games are racing away. Global sales of console hardware and games software are expected to hit a record $49.9 billion this year, says Screen Digest, a consulting firm (see chart). Games sales in America in October totalled $697m, 35% more than a year earlier, according to NPD, a market-research firm. It is often said that video games are recession-proof. Are they really?

Video gaming is isolated from the wider economic cycle by having a cycle of its own. Every few years a new crop of consoles is launched, spurring a wave of sales as gamers upgrade. (Today's set consists of Microsoft's Xbox 360, launched in 2005, and Sony's PlayStation 3 and the Nintendo Wii, which both appeared in 2006.) During the cycle the prices of the consoles fall, bringing in more buyers. Each cycle is bigger than the last as gaming becomes more popular and the average gamer becomes older and richer.



The industry has another layer of recession-proofing in that its biggest-spending customers are typically young men (the average gamer is around 30) with high disposable incomes who regard gaming as an important part of their lives, rather than a form of discretionary spending, says Piers Harding-Rolls of Screen Digest. There was no sign of weakness during America's previous recession, in 2001, he notes, though the industry was smaller than it is now.

Now that gaming has become more popular—a survey by the Pew Internet & American Life Project found that 53% of American adults play video games of some kind, for example, along with 97% of teenagers—it seems to be doing well despite the economic downturn for an extra reason: it offers a relatively cheap form of entertainment that can be consumed at home. Alex Evans of Media Molecule, the British studio behind "LittleBigPlanet", a popular PlayStation 3 game, says people in the industry believe gaming has benefited from the rise of the "staycation", or stay-at-home holiday. It is much cheaper to escape into the world of "Fable II" for a week than to go abroad.

But is there trouble brewing? In the past few months big games publishers have announced lay-offs, losses and the cancellation of many titles. The industry's two giants, Electronic Arts (EA) and Activision Blizzard, announced losses of $310m and $108m respectively in the most recent quarter. THQ, another big publisher, lost $115m. On December 9th EA said its revenues and profits would be lower than expected in 2009, owing to disappointing holiday sales. It said it would cut 6% of its workforce and focus on fewer games.

It is too soon to say whether this signals a wider slowdown. It is not unusual for firms to lay people off at this stage of the console cycle, says Mr Harding-Rolls. At the start of the cycle, he says, publishers "go all out for investment, trying to produce ideas, then at a certain stage in the cycle they pare down." EA has also suffered because it spread itself too thinly, making too many mediocre games. As retailers try to conserve cash and minimise inventories, many are restocking only the fastest-selling games. This has hurt EA, which had just one game in the American top ten in October and November, according to NPD. Hence EA's plan to concentrate on a smaller number of higher-quality titles.

EA also failed to anticipate the success of the Nintendo Wii, the most popular of the three consoles in the current cycle. (The Wii's intuitive, motion-sensitive controller means even non-gamers are prepared to give it a try.) Instead, EA and other large publishers have invested heavily in creating games for the Xbox

360 and PlayStation 3, both of which have high-definition graphics that increase the cost of designing games to $15m-25m or more. Failure to control development costs may also have contributed to the publishers' woes.

The November sales figures from NPD present a mixed picture. Software sales in America were up 11% on a year earlier, far below October's 35% growth, but hardware sales grew by 10%, against 5% in October. Given the large number of high-quality games released in October, and the fact that consoles cost far more than individual games, it is unclear whether this signals a slowdown or a pre-Christmas shift from software to hardware purchases.

The big question, says Mr Harding-Rolls, is whether the newcomers brought into the market by the Wii will keep buying games. The Wii's great strength—its broad appeal—could turn into a weakness, because less committed gamers will be quicker to cut back. Ominously, in Japan, where the Wii and Nintendo's hand-held console, the DS, have proved particularly popular with gaming neophytes, sales have slowed sharply since October. Gaming may look recession-proof so far, but that could change in 2009.

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Casual games

Keep it simple

Dec 18th 2008
From The Economist print edition

Basic games have widespread appeal

AS MANY big games publishers fail to make the most of the strong demand for compelling video games, one corner of the industry is doing better than ever. Simple "casual" games, played on a PC or a mobile phone, are booming. They may lack the narrative depth of epic console games such as "Fallout 3", but such games can be the most addictive of all, as even hard-core gamers will attest. The rise of social-networking websites and "smart" mobile phones has created new outlets for "quick fix" gaming.

Zynga, a studio based in San Francisco set up only in 2007, has hired 80 people since June, more than doubling its staff. The company primarily makes "social" games that friends can play together on social-networking sites. Zynga's "Live Poker" game for the Apple iPhone is also hugely popular.

Mark Pincus, Zynga's boss, attributes the success of its games to their social aspects. Social gaming is "a terrific category whose time has come," he says. Nor does it hurt that the games cost nothing. Zynga has adopted the online-gaming model prevalent in Asia, where games are free and users pay only for optional in-game extras. The firm has had a positive cashflow since September 2007.

Another casual-gaming firm doing well at the moment is PopCap Games, the maker of classics such as "Bejeweled" and "Peggle". ("Bejeweled", launched in 2001, kept countless underemployed people and computers busy during the dotcom bust.) The basic version of each game is free; the full version costs $20 or so.

Like Mr Pincus, Dave Roberts, the boss of PopCap, is cautiously optimistic about his firm's prospects. PopCap recently started selling games through Wal-Mart and other retailers, rather than relying on downloads. "We provide better entertainment value than a $60 Xbox 360 title," he says. That will appeal to cash-strapped consumers, he hopes.

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Face value

Santa's happy helper

Dec 18th 2008
From The Economist print edition

Alan Hassenfeld is spreading an elfish spirit throughout the toy industry

Joshua Dalsimer



"THERE will be toys under the Christmas tree this year," says Alan Hassenfeld, as confidently as if he were Santa Claus himself. After a lifetime in the toy business, the chairman of the executive committee of the board of Hasbro (short for Hassenfeld Brothers) has learnt not to worry too much about the impact of an economic downturn on his business. "The papers say everyone will get coal as presents this year," he says, "but most parents—and grandparents—in difficult times will spend less on themselves to ensure their children are happy, especially in the holiday season. That is the important leg-up toys have on almost all other retail items, except food."

The numbers seem to bear him out, which may explain why Hasbro's share price, though well below the all-time high it reached in August, is still up in a miserable year for the stockmarket. In America sales of toys grew by 10% a year during the recession of 1990-91 and by more than 3% in that of 2001. This year the growing popularity of "staycations", in which people stay at home but behave as if they were away, is helping sales, especially of family-friendly board games (Hasbro owns Monopoly and Cluedo, among others). So too has the recent fall in fuel prices, which means that money that would have gone into the tank can be spent on gifts. Around 80% of Hasbro's products are priced below $20, so the fuel/toy trade-off is a real one.

"There is no industry with more opportunity than the toy industry," says Mr Hassenfeld, who at 60 exudes a childlike enthusiasm for toys befitting someone whose family has been in the business for three generations. "As adults, we too often forget what it was to be a child," he continues, before confessing, pretending to be half-serious, that "At times, the people at Hasbro believe they are elves. I also believe that toys come alive." (Never mind that Hasbro is based in Rhode Island, rather than at the North Pole.) Among this year's bestsellers is a "FurReal" robotic puppy called Biscuit, which he says is "as close to being real as you can get, except it doesn't poo or eat expensive food." Technological innovation is one reason why Mr Hassenfeld is so excited about the future, as is Hasbro's increasingly effective extension of its toy brands such as Transformers, GI Joe and Littlest Pet Shop into new media, ranging from movies to the internet. A new partnership with Electronic Arts, a video-game firm, is already bearing fruit. Hasbro is no longer just about toys; it is also an entertainment and leisure company, says Mr Hassenfeld.

The rise of consumerism in the emerging economies—the global slowdown notwithstanding—also represents a huge opportunity for the toy industry. Until recently most of the big toy companies had barely bothered with these countries, but that is changing. Toymakers have built retailing and marketing infrastructure, and the internet enables them to circumvent the limitations of old-fashioned domestic media and globalise brands such as Hasbro's Star Wars and Transformer ranges. (This process has not been entirely smooth: Hasbro recently dropped its lawsuit against the Indian brothers behind Scrabulous, a popular online version of Scrabble, a case that was making the toy company look a lot like the Grinch.)

Since May, ensuring that Hasbro makes the most of these opportunities has been the day-to-day responsibility of Brian Goldner, the firm's second non-family chief executive since Mr Hassenfeld gave up the post in 2003. He had run the firm he joined in a junior role in 1970 since 1989, following the unexpected death of his older brother. Now he is primarily a mentor to Mr Goldner, as well as the custodian of the firm's culture and an elder statesman who is leading the effort to tackle two of the toy industry's most pressing problems.

These problems received widespread attention during 2007, the industry's *annus horribilis*, thanks largely to Hasbro's fiercest and slightly bigger rival, Mattel, the maker of Barbie dolls. (When Mr Hassenfeld was running Hasbro he turned down an offer for his company from Mattel, not least because of the clash between Mattel's aggressive culture and Hasbro's more familial and philanthropic one.) A huge recall of Mattel toys, accompanied by headlines about deadly lead paint, resulted in an orgy of China-bashing as consumers and the press worried about the toy industry's record of safety and labour practices.

Shutting the sweatshops

The attacks on China were unfair, insists Mr Hassenfeld, who is unapologetic about his belief that Chinese workers are essential if toys are to be affordable. Of the toys recalled in 2007, around 75% had design faults that originated in America (notably a flaw that resulted in small magnets being swallowed), rather than dodgy Chinese paint. The quality and labour practices of Chinese toy firms are improving fast: "China has changed," he insists, though he concedes that enforcement is not yet as tough as its newest labour laws. Ironically, the economic downturn has helped by driving thousands of Chinese toymakers out of business. Most were small, domestically oriented firms that combined low cost, low quality and exploitation of workers, says Mr Hassenfeld. He is involved with an effort to create a global standard for the ethical manufacture of toys through the International Council of Toy Industries' CARE Process. Enforcing stricter standards is good business as well as good ethics, of course, because it reassures customers and enables toymakers to continue outsourcing their manufacturing to China.

Mr Hassenfeld calculates that at least 1.3m workers, around one-third of those employed in Asia by the industry, are covered by the CARE Process, which is policed by toymakers and NGOs. As a result, he says, "I'm not so worried about child labour any more. You see it less and less, because firms know that if they are found employing children they immediately lose their certificate of compliance." Here's hoping he is right.

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The Madoff affair

Con of the century

Dec 18th 2008 | NEW YORK
From The Economist print edition

There are no heroes in the Madoff story; only villains and suckers

AFP



BERNARD MADOFF worked as a lifeguard to earn enough money to start his own securities firm. Almost half a century later, the colossal Ponzi scheme into which it mutated has proved impossible to keep afloat—unlike Mr Madoff's 55-foot fishing boat, "Bull".

The $17.1 billion that Mr Madoff claimed to have under management earlier this year is all but gone. His alleged confession that the fraud could top $50 billion looks increasingly plausible: clients have admitted to exposures amounting to more than half that. On December 16th the head of the Securities Investor Protection Corporation, which is recovering what it can for investors, said the multiple sets of accounts kept by the 70-year-old were in "complete disarray" and could take six months to sort out. It is hard to imagine a more apt end to Wall Street's worst year in decades.

The known list of victims grows longer and more star-studded by the day. Among them are prominent billionaires, including Steven Spielberg; the owner of the New York Mets baseball team; Carl Shapiro, a nonagenarian clothing magnate who may have lost $545m; thousands of wealthy retirees; and a cluster of mostly Jewish charities, some of which face closure. Dozens of supposedly sophisticated financial firms were caught out too, including banks such as Santander and HSBC, and Fairfield Greenwich, an alternative-investment specialist that had funnelled no less than $7.5 billion to Mr Madoff.

Though his operation resembled a hedge-fund shop, he was in fact managing client money in brokerage accounts within his firm, seemingly as Merrill Lynch or Smith Barney would. A lot of this came from funds of funds, which invest in pools of hedge funds, and was channelled to Mr Madoff via "feeder funds" with which he had special relationships. Some banks, such as the Dutch arm of Fortis, lent heavily to funds of funds that wanted to invest.

On the face of it, the attractions were clear. Mr Madoff's pedigree was top-notch: a pioneering marketmaker, he had chaired NASDAQ, had advised the government on market issues and was a noted philanthropist. Turning away some investors and telling those he accepted not to talk to outsiders produced a sense of exclusivity. He generated returns to match: in the vicinity of 10% a year, through thick and thin.

Charming, but far too smooth

That last attraction should also have served as a warning; the results were suspiciously smooth. Mr Madoff barely ever suffered a down month, even in choppy markets (he was up in November, as the S&P index tumbled 7.5%). He allegedly has now confessed that this was achieved by creating a pyramid scheme in which existing clients' returns were topped up, as needed, with money from new investors.

He claimed to be employing an investment strategy known as "split-strike conversion". This is a fairly common approach that entails buying and selling different sorts of options to reduce volatility. But those who bothered to look closely had doubts. Aksia, an advisory firm, concluded that the S&P 100 options market that Mr Madoff claimed to trade was far too small to handle a portfolio of his size. It advised its clients not to invest. So did MPI, a quantitative-research firm, after an analysis in 2006 failed to find a legitimate strategy that matched his returns—though they were closely correlated with those of Bayou, a fraudulent hedge fund that had collapsed a year earlier.

This was not the only danger signal. Stock holdings were liquidated every quarter, presumably to avoid reporting big positions. For a godfather of electronic trading, Mr Madoff ran the business along antediluvian lines: clients and feeder-fund managers were denied online access to their accounts. Even more worryingly, he cleared his own trades, with no external custodian. They were audited, of course, but by a tiny firm with three employees, one of whom was a secretary and another an 80-year-old based in Florida.

Perhaps the biggest warning sign was the secrecy with which the investment business was conducted. It was a black box, run by a tiny team at a very long arm's length from the group's much bigger broker-dealer. Clients too were kept in the dark. They seemed not to mind as long as the returns remained strong, accepting that to ask Bernie to reveal his strategy would be as crass as demanding to see Coca-Cola's magic formula. Mr Madoff reinforced the message by occasionally ejecting a client who asked awkward questions.

The trading business was hardly pristine either. It had been probed for front-running (trading for its own account before filling client orders) and separately found guilty of technical violations. Some clients reportedly suspected that Mr Madoff was engaged in wrongdoing, but not the sort that would endanger their money. They thought he might be trading illegally for their benefit on information gleaned by his marketmaking arm.

This failure of due diligence by so many funds of funds will deal the industry a blow. They are paid to screen managers, to pick the best and to diversify clients' holdings—none of which they did properly in this case. Some investors are understandably irate that their funds—including one run by the chairman of GMAC, a troubled car-loan firm—charged above-average fees, only to plonk the bulk of their cash in Mr Madoff's lap. This is the last thing hedge funds need, plagued as they are by a wave of redemption requests.

Financial firms that dealt with Mr Madoff are bracing themselves for a wave of litigation as individual victims go after those with deep pockets. Hedge funds will also face pressure to accept further oversight. But the affair shows the need for the government to enforce its rules better, rather than write new ones, argues Robert Van Grover of Seward & Kissel, a law firm.

Mr Madoff's investment business was overseen by the Securities and Exchange Commission (SEC), but it failed to carry out any examinations despite receiving complaints from investors and rivals since as long ago as the late 1990s. As a Wall Street fixture, Mr Madoff was close to several SEC officials. His niece, the firm's compliance lawyer, even married a former member of the team that had inspected the marketmaking division's books in 2003—though there is no evidence of impropriety.

In a rare *mea culpa*, Christopher Cox, the SEC's chairman, has called its handling of the case "deeply troubling" and promised an investigation of its "multiple failures". Having already been lambasted for fiddling while investment banks burned, the commission is now likelier than ever to be restructured, or perhaps even dismantled, in the regulatory overhaul expected under Barack Obama. As *The Economist* went to press Mr Obama was expected to name Mary Schapiro, an experienced brokerage regulator, to replace Mr Cox.

The rules themselves will need changing, too. All investment managers, not just mutual funds, could now be forced to use external clearing agents to ensure third-party scrutiny, says Larry Harris of the University of Southern California's Marshall School of Business. Regulation of financial firms' accountants may also need tightening. And more could be done to encourage whistle-blowing. Mr Madoff claims to have acted alone. But given the huge amount of paperwork required to keep his scam going, it seems unlikely that no one else knew about it.

Above all, however, investors need to help themselves. This pyramid scheme may have been unprecedented, but the lessons are old ones: spread your eggs around and, as Mr Harris puts it, "investigate your good stories as well as your bad ones." This is particularly true of money managers who work deep in the shadows or seem beyond reproach—even more so during booms, when the temptation to swindle grows along with the propensity to speculate. There will always be "sheep to be shorn", as Charles Kindleberger memorably wrote in "Manias, Panics and Crashes". Let us hope they never again line up in such numbers.

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The Federal Reserve

Ground zero

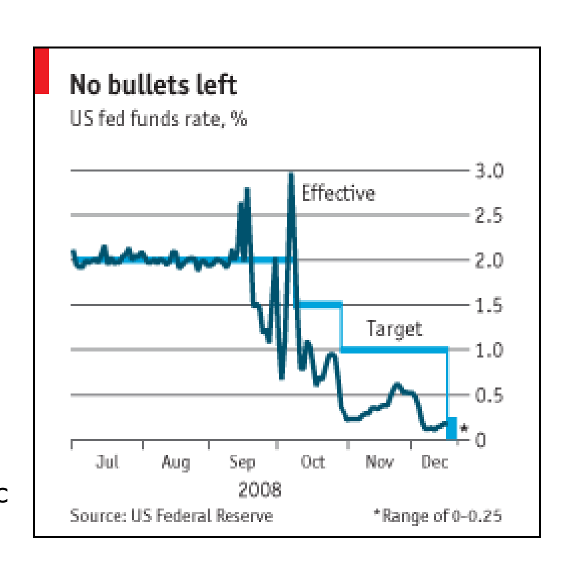
Dec 18th 2008 | WASHINGTON, DC
From The Economist print edition

Out of conventional ammunition, the Fed uses its balance-sheet to battle the slump

CENTRAL bankers ordinarily strive to be boring. But these are not ordinary times. On December 16th the Federal Reserve unveiled a three-part assault on America's slump that lit up the news wires like a pyrotechnic display.

The Fed's policy panel, the Federal Open Market Committee (FOMC), announced that it had cut its target for the federal funds rate to between zero and 0.25%, the lowest on record; it indicated it would stay there "for some time"; and having used up its conventional monetary firepower, it promised an unconventional strategy, such as the buying of mortgage-related securities and, possibly, Treasuries to lower long-term borrowing costs.

There was in fact less novelty than first met the eye. The actual funds rate, which is charged on excess reserves banks lend to each other overnight, had already fallen to below 0.2% (see chart), well below target, in part because the banking system is awash with unneeded reserves. (The FOMC is now aiming at a range rather than a level because of the difficulty of hitting the latter.) The Fed had already announced plans to buy up to $100 billion of debt directly issued by Fannie Mae and Freddie Mac, the now-nationalised mortgage agencies, and $500 billion of their mortgage-backed securities (MBSs). Ben Bernanke, the Fed's chairman, had said Treasury purchases were under consideration.



But drowning out the specifics was the thundering tone of the Fed's long statement. "The Federal Reserve will employ all available tools to promote the resumption of sustainable economic growth and to preserve price stability," it said.

Unconventional monetary policy is often called "quantitative easing" because its effect is felt through the quantity rather than the cost of credit. Through an array of lending programmes, the Fed's balance-sheet has soared from below $900 billion to more than $2 trillion, and is about to grow further.

Will these tactics work? In an exhaustive study of unconventional monetary-policy options in 2000, five Fed staff economists concluded, "These tools have their limitations, and there is considerable uncertainty regarding their likely effectiveness." The impact of the Fed's actions to date even on short-term interbank rates is inconclusive; its ability to influence much larger, globally integrated bond markets is even less certain. Still, Vincent Reinhart, who studied such policy options while at the Fed and is now at the American Enterprise Institute, a think-tank, believes they will work if they are big enough. "There is some size of the central bank's balance-sheet that will restart financial markets."

The Fed seems to believe its actions matter more for psychology than in influencing the supply of and demand for long-term debt. A senior official says the Fed is not explicitly attempting to lower long-term rates; instead it wants to narrow the unusually wide spread between yields on MBSs and Treasuries. By reassuring investors that a committed buyer is in the market, it hopes to reduce the illiquidity premium pushing yields up.

Psychology does seem to matter. The Fed has not yet bought any MBSs, but their yields have dropped from 5.45% to 3.9% since it proposed doing so. One-quarter of a percentage point of that came after this week's announcement. If this is sustained, the conventional 30-year mortgage rate should fall to around 5%, says Nicholas Strand of Barclays Capital, from over 6.5% in early November. Still, over two-thirds of the drop in MBS yields resulted from falls in Treasury yields. Even though the Treasury now explicitly supports Fannie and Freddie, MBS spreads remain wide, owing in part to reduced buying by the

companies themselves and by foreign investors, Mr Strand says.

Illustration by S. Kambayashi



Amid falling consumer spending and soaring unemployment there are some hints that policymakers' actions are making a difference. Home sales are stable and the drop in mortgage rates should help them. A bottom in housing is probably necessary to start the healing process elsewhere in the economy. Share prices have risen since late November.

The Fed's gung-ho leadership may also nudge other central banks towards easing more aggressively. The dollar fell sharply, particularly against the euro, after the Fed's action. That may weaken the European Central Bank's reservations about cutting rates again. Similarly, if the weaker dollar takes pressure off sterling, the Bank of England may be more willing to ease again.

The dollar's drop may also reflect some fear that the Fed will be slow to reverse course, leading to inflation. That, however, is a worry for another day. Falling petrol prices triggered the largest monthly drop in American consumer prices on record in November. With unemployment likely to increase further, the immediate concern is that inflation could fall too low.

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World trade

Barriers to entry

Dec 18th 2008
From The Economist print edition

A rise in protection would worsen the already grim outlook for world trade

REMEMBER 1982, when the Soviet threat haunted America and China was still a giant backwater that had only just started reforming its economy? Few will recall that it was also the last year in which the volume of world trade shrank. Twenty-seven years later, it is likely to fall once again—by 2%, the World Bank predicts.

It is not just that China's export juggernaut has stalled. Caroline Freund, an economist at the bank, says that most countries for which data are available have reported double-digit declines in exports in the year to November. Exports from Chile, South Korea and Taiwan dropped by about 20%. November's figures may have exaggerated the gloom because of a precautionary rundown of inventories and a shortage of trade finance, both of which may be short-lived. But there is little dispute that a serious slowdown in trade is under way.

Overlaying the worsening economic outlook is the lingering threat of protectionism, which could drive trade volumes even lower next year. It is always tempting for politicians to throw up new trade barriers when jobs and wages are at risk, even if such a response, though individually appealing, is collectively futile.

Few fear a return to the punitive tariffs of the Depression, but Richard Baldwin, policy director of the Centre for Economic Policy Research, a research network, notes that during the Asian crisis in the late 1990s, some of the afflicted countries raised tariffs and rich countries responded with higher anti-dumping fees. It could be worse this time, he believes, because the crisis is more widespread. India, Russia and Vietnam have raised tariffs already this year. Trade litigation has also picked up. Mr Baldwin says the number of anti-dumping cases jumped by 40% in the first half of 2008.

Tariff increases may be the protectionist's barrier of choice, despite limits agreed by members of the World Trade Organisation (WTO). This is because in the past decade many countries have unilaterally cut tariffs to well below those limits. They have plenty of room to raise them without breaking any rules.

If all countries were to raise tariffs to the maximum allowed, the average global rate of duty would be doubled, according to Antoine Bouet and David Laborde of the International Food Policy Research Institute in Washington, DC. The effect could shrink global trade by 7.7%.

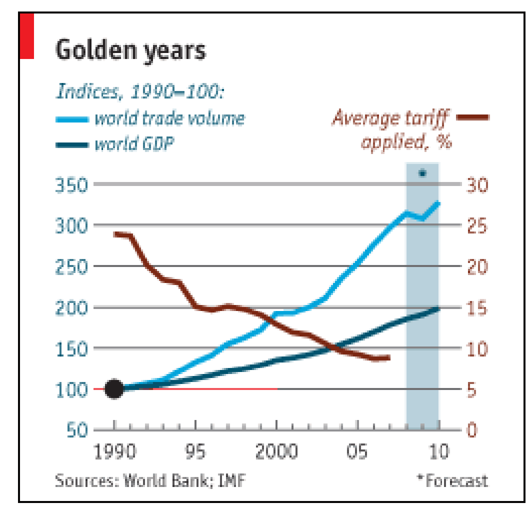
There are other, more subtle, means of protection available. Marc Busch, a professor of trade policy at Georgetown University in Washington, DC, worries that health and safety standards and technical barriers to trade, such as licensing and certification requirements, will be used aggressively to shield domestic industries as the global downturn drags on.

Closing the back door, too

Subsidy and currency levers can also be pulled to distort trade. A government bail-out of the Detroit carmakers would favour those firms over their competitors. China's government is reported to be considering subsidies and higher export rebates for its steel mills. (It has already announced higher export tariff rebates on 3,700 items in an effort to boost its sales abroad.) A recent slide in the yuan has also raised fears of competitive devaluations.

Faced with such threats, there would appear to be an even greater need to complete the Doha round of trade talks. This would help to reduce the gap between actual and maximum tariffs. However, the talks, which have already dragged on since 2001, stalled again in

July, and a ministerial meeting pencilled in for mid-December was postponed. Since that tremor in 1982, world trade has benefited from more than two decades of increasing openness. Tariffs on goods have fallen from a worldwide average of 26% in 1986 to 8.8% in 2007. Trade has grown spectacularly—more than twice as fast, on average, as world output (see chart). It has also become more inclusive: developing countries have nearly doubled their share of world exports since 2000, to 37% in 2007. A rise in protectionism could turn the clock back a long way.



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Economics focus

Banks need more capital

Dec 18th 2008
From The Economist print edition

In a guest article, Alan Greenspan says banks will need much thicker capital cushions than they had before the bust

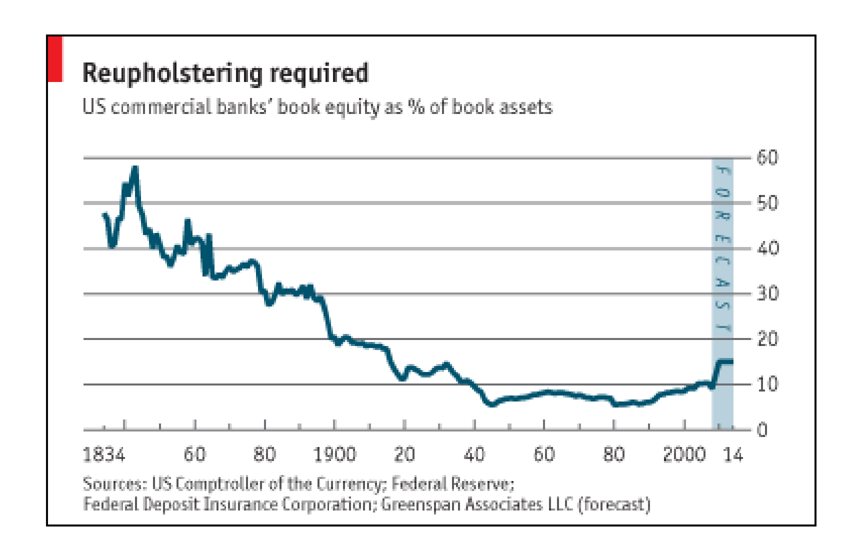
Greenspan Associates

Alan Greenspan was the chairman of the Federal Reserve Board from 1987 to 2006. He is now president of Greenspan Associates

GLOBAL financial intermediation is broken. That intricate and interdependent system directing the world's saving into productive capital investment was severely weakened in August 2007. The disclosure that highly leveraged financial institutions were holding toxic securitised American subprime mortgages shocked market participants. For a year, banks struggled to respond to investor demands for larger capital cushions. But the effort fell short and in the wake of the Lehman Brothers default on September 15th 2008, the system cracked. Banks, fearful of their own solvency, all but stopped lending. Issuance of corporate bonds, commercial paper and a wide variety of other financial products largely ceased. Credit-financed economic activity was brought to a virtual standstill. The world faced a major financial crisis.

For decades, holders of the liabilities of banks in the United States had felt secure with the protection of a modest equity-capital cushion, allowing banks to lend freely. As recently as the summer of 2006, with average book capital at 10%, a federal agency noted that "more than 99% of all insured institutions met or exceeded the requirements of the highest regulatory capital standards."

Today, fearful investors clearly require a far larger capital cushion to lend, unsecured, to any financial intermediary. When bank book capital finally adjusts to current market imperatives, it may well reach its highest levels in 75 years, at least temporarily (see chart). It is not a stretch to infer that these heightened levels will be the basis of a new regulatory system.



The three-month LIBOR/Overnight Index Swap (OIS) spread, a measure of market perceptions of potential bank insolvency and thus of extra capital needs, rose from a long-standing ten basis points in the summer of 2007 to 90 points by that autumn. Though elevated, the LIBOR/OIS spread appeared range-bound for about a year up to mid-September 2008. The Lehman default, however, drove LIBOR/OIS up markedly. It reached a riveting 364 basis points on October 10th.

The passage by Congress of the $700 billion Troubled Assets Relief Programme (TARP) on October 3rd

eased, but did not erase, the post-Lehman surge in LIBOR/OIS. The spread apparently stalled in mid-November and remains worryingly high.

How much extra capital, both private and sovereign, will investors require of banks and other intermediaries to conclude that they are not at significant risk in holding financial institutions' deposits or debt, a precondition to solving the crisis?

The insertion, last month, of $250 billion of equity into American banks through TARP (a two-percentage-point addition to capital-asset ratios) halved the post-Lehman surge of the LIBOR/OIS spread. Assuming modest further write-offs, simple linear extrapolation would suggest that another $250 billion would bring the spread back to near its pre-crisis norm. This arithmetic would imply that investors now require 14% capital rather than the 10% of mid-2006. Such linear calculations, of course, can only be very rough approximations. But recent data do suggest that, while helpful, the Treasury's $250 billion goes only partway towards the levels required to support renewed lending.

Government credit has in effect acted as counterparty to a large segment of the financial intermediary system. But for reasons that go beyond the scope of this note, I strongly believe that the use of government credit must be temporary. What, then, will be the source of the new private capital that allows sovereign lending to be withdrawn? Eventually, the most credible source is a partial restoration of the $30 trillion of global stockmarket value wiped out this year, which would enable banks to raise the needed equity. Markets are being suppressed by a degree of fear not experienced since the early 20th century (1907 and 1932 come to mind). Human nature being what it is, we can count on a market reversal, hopefully, within six months to a year.

Though capital gains cannot finance physical investment, they can replenish balance-sheets. This can best be seen in the context of the consolidated balance-sheet of the world economy. All debt and derivative claims are offset in global accounting consolidation, but capital is not. This leaves the market value of the world's real physical and intellectual assets reflected as capital. Obviously, higher global stock prices will enlarge the pool of equity that can facilitate the recapitalisation of financial institutions. Lower stock prices can impede the process. A higher level of equity, of course, makes it easier to issue debt.

Another critical price for the return of global financial stability is that of American homes. Those prices are likely to stabilise next year and with them the levels of home equity—the ultimate collateral for global holdings of American mortgage-backed securities, some toxic. Home-price stabilisation will help clarify the market value of financial institutions' assets and therefore more closely equate the size of their book capital with the realities of market pricing. That should help stabilise their stock prices. The eventual partial recovery of global equities, as fear inevitably dissipates, should do the rest. Temporary public capital injections into banks would facilitate this process and arguably provide far more benefit per dollar than conventional fiscal stimulus.

Even before the market linkages among banks, other financial institutions and non-financial businesses are fully re-established, we will need to start unwinding the massive sovereign credit and guarantees put in place during the crisis, now estimated at $7 trillion. The economics of such a course are fairly clear. The politics of draining off that much credit support in a timely way is quite another matter.

For a discussion of this article, see www.economist.com/freeexchange

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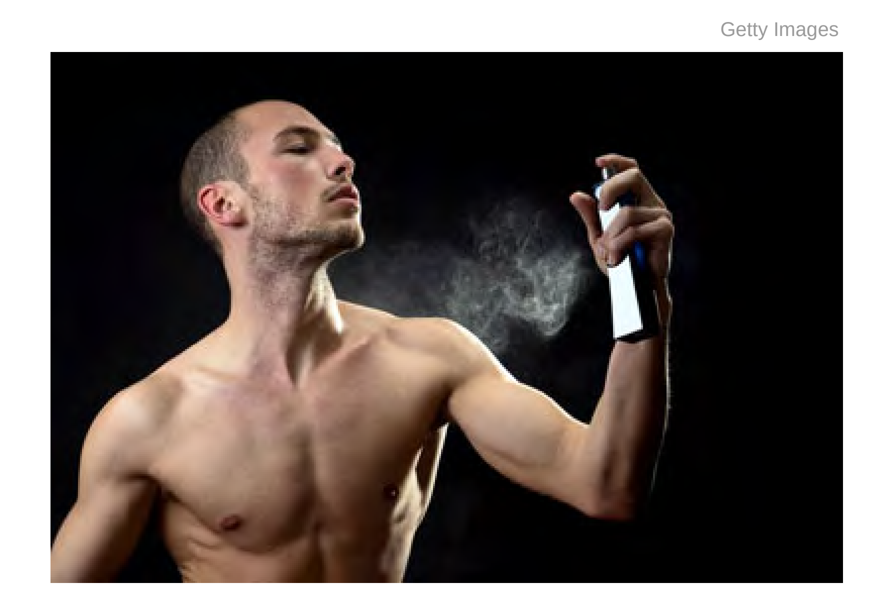
Perfume science

The scent of a man

Dec 18th 2008
From The Economist print edition

To attract a woman by wearing scent, a man must first attract himself

Getty Images



THE very word "perfume" has feminine overtones to many male ears. Men can be sold "deodorant" and possibly "aftershave", but the idea of all those dinky little bottles with their fussy paraphernalia is too much for the sensitive male ego. Yet no industry can afford to neglect half its potential market, and perfume-makers are ever keen to crack the shell of male reticence. Now they may know how to do so.

Craig Roberts of the University of Liverpool and his colleagues—working with a team from Unilever's research laboratory at nearby Port Sunlight—have been investigating the problem. They already knew that appropriate scents can improve the mood of those who wear them. What they discovered, though, as they will describe in a forthcoming edition of the *International Journal of Cosmetic Science*, is that when a man changes his natural body odour it can alter his self-confidence to such an extent that it also changes how attractive women find him.

Half of Dr Roberts's volunteers were given an aerosol spray containing a commercial formulation of fragrance and antimicrobial agents. The other half were given a spray identical in appearance but lacking active ingredients. The study was arranged so that the researchers did not know who had received the scent and who the dummy. Each participant obviously knew what he was spraying on himself, since he could smell it. But since no one was told the true purpose of the experiment, those who got the dummy did not realise they were being matched against people with a properly smelly aerosol.

Over the course of several days, Dr Roberts's team conducted a battery of psychological tests on both groups of volunteers. They found that those who had been given the commercial fragrance showed an increase in self-confidence. Not that surprising, perhaps. What was surprising was that their self-confidence improved to such an extent that women who could watch them but not smell them noticed. The women in question were shown short, silent videos of the volunteers. They deemed the men wearing the deodorant more attractive. They were, however, unable to distinguish between the groups when shown only still photographs of the men, suggesting it was the men's movement and bearing, rather than their physical appearance, that was making the difference.

For Unilever and other manufacturers of men's scent, this is an important discovery. The firm's marketing of its main product in this area, a deodorant called Lynx, plays up the so-called "Lynx Effect"—which is supposed to make men irresistibly attractive to women. Dr Roberts's experiment, however, suggests that the advertised "Born chicka wah wah" of the product may have nothing to do with a woman's appreciation

of the smell, and everything to do with its psychological effect on the man wearing it.

Nor is this the only example of science illuminating the true role of perfumes. How they work to make people attractive is, as this example shows, not as obvious as it might seem.

Born chicka wah, ker-ching chicka ching

There are three broad theories of perfume use. One is that people employ it to mask body odours that they perceive as bad. The second is that some perfumes contain chemicals that mimic human pheromones—elusive, mysterious (and possibly mythical) substances believed by some to play a role in mating. The third is that people use it to heighten or fortify natural scent, and thus advertise sexual attractiveness or availability.

All three theories could be true. In particular, the role of perfume as an olfactory disguise is obvious. Even here, however, there are some subtle twists. Bad smells are not just a matter of poor hygiene. Illness and old age both bring characteristic odours of their own, and neither state makes people more attractive. Perfumes may spoof these messages. Hence the marketing of a new scent called Ageless Fantasy, by Harvey Prince, which claims its product disguises the "odour of ageing", suggested to be caused by the breakdown of a particular fatty acid in the skin.

As to pheromones, whether humans have these is questionable. A pheromone is a chemical that elicits a specific behavioural response at a distance. Some insects, for example, can release sex pheromones that will attract a mate from many kilometres away. The most likely human candidate is a substance called androstadienone. This is a derivative of testosterone that is found in men's sweat and is known, from brain-scanning studies, to promote activity in parts of women's brains. That this results in changes in behaviour has not, however, been clearly demonstrated.

Terri Molnar, a spokeswoman for the Sense of Smell Institute, a research organisation in New York tied to the fragrance industry, says of human pheromones, "I think we believe they exist but they do not function as an attractant. They will elevate one's mood but not attract a mate."

The fallen sons of Eve?

The most interesting area, though, is the interaction between perfumes and natural scents that carry messages but do not have the specific properties of pheromones. Odours co-ordinate a wide range of human behaviour. Mothers can recognise their children by smell. Children can recognise each other. Relatives can be distinguished from non-relatives, even to the extent of understanding who is genetically different enough from the smeller to be a good choice of mate. The sexes themselves smell different, too, and women can glean information about a man's social status from his smell alone.

As long ago as the 1950s, a perfumer called Paul Jellinek noted that several ingredients of incense resembled scents of the human body. It was not until 2001, however, that Manfred Milinski and Claus Wedekind of the University of Bern wondered whether there was a correlation between the perfume a woman preferred and her own natural scent. They found that there is.

The correlation is with the genes of what is known as the major histocompatibility complex (MHC). This region of the genome encodes part of the immune system. It turns out that one of the most important aspects of mate choice in mammals, humans included, is to make sure that your mate's MHC is different from your own. Mixing up MHCs makes the immune system more effective. The MHC is also thought to act as a proxy for general outbreeding, with all the hybrid vigour that can bring. Fortunately, then, evolution has equipped mammals with the ability to detect by smell chemicals whose concentrations vary with differences in the MHC of the producer.

That means people are able to sniff out suitable MHC genomes in prospective partners. A woman, for instance, will prefer the smell of T-shirts that have been worn by men whose MHC genes are appropriately different from their own. Dr Milinski and Dr Wedekind also found an association between a woman's MHC genes and some of her preferences for perfume. Perception of musk, rose and cardamom is correlated with the MHC. Perception of castoreum and cedar is not.

Women, it seems, choose not the kind of smell they would like on a partner, or even one that might mask a nasty odour of their own, but rather something that matches their MHC. In other words, they are

advertising their own scent.

There are many useful inferences that might be drawn from this research. One would be that a woman's choice of perfume will resist the vagaries of fashion. This may explain why most innovation in the industry involves changes in packaging and marketing, producing all that fussy paraphernalia, rather than changing what is in the bottle.

Another implication, says Dr Roberts, is that it is probably best that people choose perfumes for themselves rather than for someone else—unless they happen to know what the recipient likes. If you have made a good genetic choice of partner (ie, someone with a significantly different MHC), then the theory suggests that you should not be able to choose something that smells nice to them based on your own preferences. You might, though, have better luck choosing for a close relation, because she would probably have an MHC similar to your own.

The research also raises the question of what so-called unisex perfumes are for. In any genetically successful love match, one of the partners ought to hate a unisex perfume. Perhaps, in a world of olfactory fakery, this is one tip for the wise. If your partner has a strange knack of being able to pick out all the right perfumes, this may not be a good sign at all. And that, of course, means that the best you can hope for this Christmas is that he has bought you a perfume that you absolutely hate.

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Engineering

Steam on

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From The Economist print edition

A new vehicle arrives to break an old record

THE early days of motoring produced a three-horseless race, as it were. To start with, electric and steam-powered vehicles outsold those with newfangled internal-combustion engines. However, the invention of the starter motor and the longer range of the petrol- and diesel-powered models eventually gave those vehicles the edge, and electric and steam-powered cars drifted into obscurity. Now, with the benefit of advanced electronics and lightweight batteries, electric cars are staging a comeback. Could steam cars do the same?

This week, a group of engineers known as the British Steam Car Challenge have been completing the initial test runs of a 7.7-metre (25-foot) steam car which they hope will travel at more than 274kph (170mph). Early next year they will ship it to America for high-speed testing. Eventually, they hope to beat the land-speed record for steam cars.

The existing record, 205kph, was set in 1906 by Fred Marriott, driving a souped-up version of a production vehicle called a Stanley Steamer. To beat it, the Challengers have to make two high-speed runs within an hour, which means turning their vehicle around rapidly, refilling it with water and firing up the boiler again—which for this car is far from simple.

Although the development of steam locomotion has largely ground to a halt in recent years, some aspects of the technology have continued to advance. In particular, turbines have replaced pistons as the most efficient way to extract mechanical energy from steam. Today, steam turbines are used to generate most of the world’s electricity. So it is no surprise to find the British car uses a two-stage turbine driven by pressurised steam.

To get that head of steam, you need to begin with the right water; it has to be demineralised, to avoid contaminating the 3km of tubing running through the 12 boilers inside the car. The water is fed to the boilers from a pair of bladders that are squeezed to a pressure of 40 atmospheres by compressed air. A liquefied-petroleum-gas burner fires the boilers and superheats the water to 400ºC. It is then injected into the turbine at twice the speed of sound, at which point it turns into steam. The turbine then drives the rear wheels.

Once filled and ready the steam car takes about eight minutes to get going (another reason they went out of fashion). It carries enough fuel, compressed air and water for a three-minute run, which should be ample for the driver, Charles Burnett, to take the record.

Although it is hard to imagine a steam car ever taking to the roads again, some of its technology could be useful. Gas turbines are already seen as an efficient way of making small generators for electric cars. Steam-powered ones might work too.

The real motive for the new car, though, is probably the nostalgia that seems to cling to all sorts of steam-powered devices. Enthusiasts recently completed *Tornado*, the first steam-powered locomotive to be built in Britain for nearly 50 years, at a cost of £3m ($4.6m). But it is largely based on plans from the 1940s, updated to meet modern safety standards. *Tornado* will take passengers on day trips on main lines. Sadly, there is no sign yet of a high-tech Stanley Steamer.

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Cosmology

A shot in the dark

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From The Economist print edition

More signs of universal dark energy

IT IS hardly surprising that something called dark energy is hard to study. It is important, though. If it exists at all, it makes up about three-quarters of the stuff in the universe. And if it does not exist, then existing theories of physics will have to be scrapped.

The latest evidence that dark energy really does exist was produced on December 16th by Alexey Vikhlinin, of the Smithsonian Astrophysical Observatory in Cambridge, Massachusetts, and his colleagues. They used an orbiting X-ray telescope called *Chandra* to study the way that clusters of galaxies grow. They discovered that this growth is stifled in exactly the way that dark-energy theory predicts.

The idea of dark energy was dreamed up ten years ago, to explain why the expansion of the universe that began with the Big Bang seems to be accelerating, rather than slowing down. That unexpected finding was the result of studies of supernovas whose apparent brightness (and therefore distance) did not match the previous theory. Dark energy causes the acceleration by pushing space itself apart, altering the distances to the supernovas as it does so.

Dark energy is also a convenient explanation for another curiosity. Geometrically, space is flat. For it to be held that way, rather than getting more and more curved over time, the amount of matter and energy it contains must be at a particular, critical density. Without the dark energy needed to explain the acceleration, the universe would have only a quarter of the necessary density. It is therefore a relief that Dr Vikhlinin’s results agree with the theory: the pushing apart of space that dark energy causes makes it harder than it otherwise would be for galactic clusters to grow.

This result does not bring physicists much closer to understanding what dark energy actually is. The favoured explanation is the so-called cosmological constant—an as-yet-unobserved consequence of the general theory of relativity. But that theory predicts a force far more powerful than the one actually seen. So the truth is that physicists are still in the dark.

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Psychology

Malice aforethought

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From The Economist print edition

Pain is enhanced if deliberately inflicted

IF SOMEONE accidentally steps on your toe, it hurts. But does it hurt more if you think he did it deliberately? That, in essence, is the question Kurt Gray and Daniel Wegner of Harvard University asked in a study they have just published in *Psychological Science*. And their answer is that it probably does.

Dr Gray and Dr Wegner did not actually tread on people's toes as part of their experiments. But they did arrange for them to receive electric shocks. Altogether, they induced a group of 43 students to participate with offers of academic credits or, failing that, cold cash.

On the day of the experiment, each participant was introduced to a study partner, whom he was told was another student participant but who was in fact an accomplice of the two researchers. The students were then told about a number of tasks, which included matching colours, estimating numbers, judging musical pitches and assessing levels of discomfort. They were later asked to perform each of these tasks during a series of trials.

In truth, Dr Gray and Dr Wegner were interested only in the assessments of discomfort; the rest were mere blinds. In this task, a participant received an electric shock and was asked to evaluate the experience on a scale ranging from one (not at all uncomfortable) to seven (extremely uncomfortable).

During each trial, the participant saw a computer screen which displayed two potential tasks for that session. When assessing discomfort was one of these, the other was always evaluating the relative pitches of two tones. In this, as in the other trials, the participant was told that his partner in the next room would select which task he had to complete.

In fact, participants received an electric shock whenever assessment discomfort was one of the options displayed. But how they thought it had been administered had a crucial effect on their perception of pain. Half the time, the participants were told that their partner had chosen to shock them. The other half they were told that their partner had chosen not to shock them, but that the experimental protocol meant this decision had been reversed.

On the one-to-seven scale that Dr Gray and Dr Wegner asked the participants to use to assess their pain, the students rated the strength of shocks they thought had been intentionally administered at 3.62, on average; those they thought unintentional averaged 3.00. The researchers also found the apparently unintentional shocks hurt progressively less as the experiment went on, whereas those perceived as deliberate continued to hurt as much.

It would seem, therefore, that malice not only carries a sting of its own. Compared with accidental pain, the sting also lasts longer.

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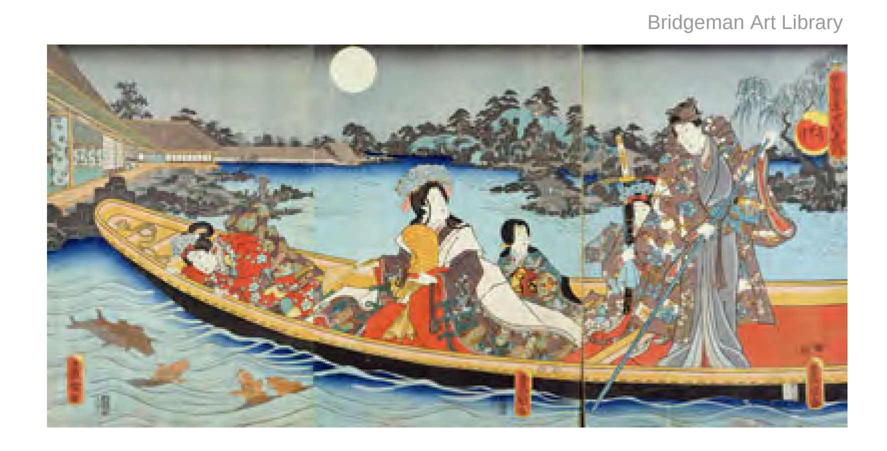
"The Tale of Genji"

Playboy of the eastern world

Dec 18th 2008
From The Economist print edition

The first modern novel celebrates its 1,000th birthday

Bridgeman Art Library



IT CONTAINS no military adventures nor epic journeys. Yet "The Tale of Genji" is in every way Japan's equivalent of Homer's "Iliad". First mentioned in a diary exactly 1,000 years ago, in late 1008, it has over the centuries been subject to changes, adaptations, mutations and translations (not to mention being remade as a *manga* comic), all of which have helped it not just survive, but flourish. Today this account of the amorous escapades of an aristocratic aesthete is widely regarded as the first modern or psychological novel.

The book's success lies in its broad appeal. Right-wing Japanese commentators point to "The Tale of Genji" and take great pride in emphasising how much more sophisticated civilisation was in Japan in the 11th century compared with Europe at that time. For middle-aged Japanese, reading the book at study groups in adult-education centres is as popular, and as quintessentially Japanese, as flower-arranging or the tea ceremony. Feminists rejoice that the author, Murasaki Shikibu, was a woman, even if writing fiction was generally regarded as frivolous and lowbrow; not an activity for men.

The book's 1,000th anniversary is being celebrated in Japan with lectures, symposia, plays, conferences and concerts. A line of Genji tea and Genji sweets is already on the market and the CD of a newly composed Genji symphony goes on sale this month.

Ruthlessly summarised, the book's storyline goes like this. The "dazzlingly lovely" Genji, son of the emperor and one of his lower-grade consorts, is irresistible to women. He enjoys a string of affairs as a young man, even abducting a ten-year-old girl so he can mould her into the perfect life-companion. But sleeping with the daughter of the leader of the opposing political faction is one indiscretion too many and Genji is forced into exile. Recalled eventually to the capital, he builds himself a mansion with a different woman in each of its four wings. Honours are heaped upon him and he is offered the retired emperor's daughter as a wife. But Genji's royal bride betrays him with another man and when his beloved mistress dies after a long illness, our heartbroken hero follows her swiftly to the grave.

At this point the reader is only two-thirds of the way through the book, which runs to 1,200 pages in its most recent English translation and boasts a cast of more than 400. The story resumes with new heroes. Two young men (the purported son and grandson of Genji) are wooing a trio of sisters. One of them succumbs to marriage, but of the other two sisters, one starves herself to death and the other chooses to become a nun rather than fall into male hands. Love, it turns out, is not innocent hanky-panky, but something noxious, corrosive—even deadly.

Sheer scale is not all that is forbidding about the book. Japanese prose was still in its infancy in Murasaki's day, so her syntax can be opaque. Sentences lack subjects, direct speech is often unattributed

and, most alarmingly, the characters change names according to their rank or circumstances. Genji, for instance, is variously referred to as the captain, the consultant, the commander, the grand counsellor, the palace minister, the chancellor and the honorary retired emperor.

The subject matter is also challenging. There is polygamy, bisexuality (when one young woman rebuffs his advances, Genji consoles himself with her younger brother who turns out to be "no bad substitute for his ungracious sister") and something very close to incest. Genji is attracted to Fujitsubo, one of his father's consorts, because of her resemblance to his dead mother. Even though she is, in effect, his stepmother, he fathers a child with her.

Murasaki's language was already archaic and impenetrable a century after it was written, so the Japanese have been reading annotated, abridged, simplified and illustrated versions of the book since as early as the 12th century. The same holds true today. In the last century, four Japanese writers produced a total of seven updated versions of the book. The most recent of these was by Jakucho Setouchi, a female novelist whose own work deals with issues of women's independence. Setouchi's "Genji" has sold more than 3m copies since it was published in December 1996, a success that Kodansha, the publisher, attributes to the author's empathy with the women in the tale and her colloquial writing. Canny marketing also played a part, with Kodansha organising lectures and discussion groups all over the country at the time of the launch.

Freer and less reverential adaptations exist as well. Also from Kodansha is Waki Yamato's "Fleeting Dreams", a "sugar and spice and all things nice" take on Genji in *manga* form that has sold 17m copies. For those who prefer a less saccharine approach, Shogakukan, a rival publisher, came up with another *manga* version that emphasises the malicious female characters and includes plenty of explicit sex.

It took until the 20th century before a complete English-language version appeared. Arthur Waley, a Cambridge classicist who taught himself Japanese and Chinese, produced the first English translation in six instalments between 1925 and 1933. Waley was much more interested in readability than fidelity. He sped up the plot, cut long descriptive scenes and the occasional entire chapter. He clarified many of the sentences, added psychological background to the characters and westernised the Japanese architecture. The result was a prose masterpiece, though one which modern scholars prefer to call an adaptation rather than a translation.

Lytton Strachey, a neighbour of Waley's, considered his translation "beautiful in bits", but the reaction from Japan was much warmer. Even if Waley's Japanese noblemen sound a little like early-20th-century Cambridge undergraduates, one contemporary Japanese writer famously declared that the Englishman had breathed life into a work that had been tottering around like a headless corpse. Indeed, Waley's stature in Japan is such that Heibonsha, another publisher, recently released a retranslation of Waley's "Genji" back into Japanese. "Even in the modern-language versions of 'Genji', the majority of Japanese readers don't make it much past the opening chapters," explains Takao Hoshina, an editor at Heibonsha. "Waley's is the most accessible version for us too."

In 1976 Edward Seidensticker, an academic already celebrated for his translations of Yasunari Kawabata, a Nobel prize-winning novelist, brought out a new version. Torn between admiration for Waley's narrative verve and horror at the liberties he had taken with the text, Seidensticker produced a "Genji" that was doggedly faithful but a little lacking in grace.

It was left to Royall Tyler, whose charming and urbane "Genji" came out in 2001, to chart the course between the exuberance and the exactitude of his two predecessors. Perhaps because he lives in the Australian bush, Mr Tyler was willing to recognise that readers can lose their way in the novel's vastness and so provides a handy kit of orientation tools: chapter-by-chapter lists of the characters and footnotes to explain the imagery of the poems dotted throughout the text.

"The Tale of Genji" rewards perseverance, but just as young Genji flits from one mistress to the next, so the reader can choose between the three English versions of the story. Effervescent Waley, prim Seidensticker or suave Tyler—who will you take to bed with you tonight?

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New crime fiction

Death in the afternoon

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SPAIN during the second world war offers rich pickings for spy writers. Tungsten was produced there, which was vital for the armaments and ballistics industries of both sides. Nazi front companies ran global money-laundering operations from there and Madrid was always a nest of spooks.

Illustration by Daniel Pudles



The Maze of Cadiz
By Aly Monroe



John Murray; 294 pages; £16.99

Buy it at
Amazon.co.uk

As a fascist, General Franco's sympathies naturally leaned more towards the Axis powers. But Spain remained determinedly neutral. Early in the war Franco despatched the Blue Division, Spanish troops who served on the Eastern front. Yet he also let numerous Jewish refugees pass through Spain, and in the winter of 1944 Spanish diplomats in Budapest saved thousands of Jews by issuing them with protection papers.

Into this whirlpool steps Peter Cotton, a British spy sent to arrest a colleague, Ronald May, an agent-turned-rogue, and close down his operation in Cadiz. Cotton speaks fluent Spanish, albeit with a posh Mexican accent, learnt as a child in Central America. Language helps, but not enough to navigate the powerful undertows pulling the country in opposite directions as the war draws to a close. When Cotton arrives May is already dead, his body fished out from the sea. Did he jump or was he pushed? Cotton's colleague Henderson, a dullard and paper stamper, is no help at all. Ramírez, the charming chameleon who serves as the local police chief, has all sorts of information to trade, but his own agenda, or agendas, to pursue. A pretty Irish governess and a glacial Teutonic blonde all add merrily to the mix.

A little more menace would be welcome, but Aly Monroe knows her Spain and wears her learning lightly. Her writing is skilful and evocative, with hints of Alan Furst. Wartime Cadiz itself is brilliantly drawn: the creaking social formalities of the war-weary Spanish bourgeoisie; the heavy silence of the fascist-era siesta and the endless shabby grind of the dictatorship. And overlaying everything, the heat and dust of a late Spanish summer. "The Maze of Cadiz" is a stylish and impressive debut. Peter Cotton will be back; this is just the first in a planned series.

The Maze of Cadiz.
By Aly Monroe.
John Murray; 294 pages; £16.99

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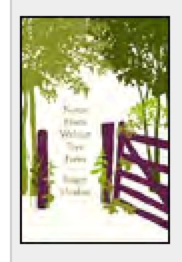
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Nature writing

An English scribbly bark

Dec 18th 2008
From The Economist print edition

Notes From Walnut Tree Farm
By Roger Deakin



Hamish Hamilton; 308 pages; £20

Buy it at
Amazon.co.uk

ROGER DEAKIN, who died in 2006, played a large part in the current revival of writing about nature and landscape in Britain. He did not publish much during his life—a book about trees and their spiritual significance called "Wildwood", and another about swimming in rivers and ponds, "Waterlog". Yet those two slim books managed to draw the attention of readers towards things that were either new or neglected: the spell that the natural world can cast on the urban imagination; the teeming variety of the modest English countryside and the oddly unexplored landscape of Deakin's home territory, that part of England known as East Anglia.

"Notes From Walnut Tree Farm" is presented as an account of a single rural year, but was actually assembled from six years' worth of diaries. It begins as it goes on: Deakin lying full length on the ground in the fields and meadows around his ancient oak-framed farmhouse. He cuts away at troublesome roots, investigating and naming tiny insects. He records the shapes and behaviour of the unregarded plants that other people might call weeds and he traces the ecology of a village green dating back to the tenth century.

All rural cultures are intensely local. Here it seems is the record of a mind tuned by the special village character of what Bishop Hall, a 17th-century writer, described as the "sweet and civil county" of Suffolk. In fact, Deakin sprang from a quite different sort of world.

He was brought up in a grey north-London suburb. His early career was metropolitan: he had been an advertising executive, and a successful one. He had travelled widely—places such as Kyrgyzstan and Kurdistan find several mentions in these diaries. He made films and radio documentaries. And even after buying the rural ruin that he rebuilt and named Walnut Tree Farm, there was still his London flat in fashionable Belsize Park to fall back upon.

London and Suffolk are actually close neighbours, no more distant than Connecticut and New York City. "Notes From Walnut Tree Farm" keeps reminding us that England is small and that even the most remote village is not very remote. In England a large town is never far distant; rural and urban are connected. So we find Deakin taking a break from the Suffolk wind and hooting owls, and falling asleep in the "throbbing silence" of central London. He notices a country spider on his rucksack in Museum Street: "it stays with me somehow all the way home on the train to Suffolk, and escapes onto my study desk, then out into the garden through the open window."

There is a tradition of nature writing that is really writing about how an individual should live, and how human society might be organised. It is the tradition of Henry David Thoreau's "Walden" (which this book echoes in form). Deakin has had a hand in reinvigorating that tradition in England, along with colleagues. So in these diaries there is mention of his friend and neighbour, Richard Mabey, who tackled East Anglia and the spiritual relation of man and place in his book "Nature Cure". He pays several visits to Ronald Blythe, the oldest and subtlest of the Anglians. And there are trips with Robert Macfarlane, a Cambridge academic who scored a big commercial hit with his recent book "The Wild Places", philosophising on the possibility of wildness in a world that seems to have shrunk.

There is less philosophising here, but plenty of close-up scrutiny of pond-living beetles, spiders and flies, petals and pollens, and above all (literally as well as imaginatively) trees. For Deakin, trees are almost an alternative society, and timber is the reserve currency of his imaginative life. "Cutting up firewood, I came across a stem of elm wonderfully inlaid with the workings of a beetle," he writes, "an English scribbly bark."

This book is a vivid unguarded work, the material not necessarily intended for publication. It betrays how the conservationist in us may well be driven by some buried feelings of loss. In Deakin's case it was the loss of his father, who one day in the writer's youth simply did not return home. "My father had been found dead, on a Bakerloo Line tube train at Euston Square station...Thus did I acquire my sense of loss—a deep-seated feeling that has followed me around all my life and that I've never shaken off." A powerful mental picture, even though the Bakerloo does not in fact go to Euston Square.

Notes From Walnut Tree Farm.
By Roger Deakin.
Hamish Hamilton; 308 pages; £20

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Barilla's cookery library

Food for thought

Dec 18th 2008 | PARMA
From The Economist print edition

A pasta-maker gets a taste for books

TIME presses unrelentingly onward, especially at this time of year, but some traditions hold firm. Roast turkey, potatoes and Brussels sprouts were served to guests at the Pensione Bozzola in Milan on Christmas Day in 1938. The small record of that meal, its print and floral decoration now faded, is one of a collection of menus that Barilla, the world's biggest pasta-maker, has brought together in its library in Parma, Italy's gastronomic capital.

For nearly 90 years until production ceased in 1999, a factory made pasta where the library now stands, in a square near the city's centre. Machinery was stripped out, the factory demolished, the site developed to a design by Renzo Piano, a leading Italian architect, and the Academia Barilla opened in 2004, its basement housing the library. The ground floor holds a theatre, lecture hall and kitchens where the arts of Italian cooking are taught to aspiring professional chefs, well-to-do food-lovers from around the world, and teams of managers encouraged to bond over chopping blocks and mixing bowls. The library of over 8,500 cookery books in more than ten languages, nearly 5,000 menus and scores of old prints showing food in various phases of preparation serves students and teachers alike.

Academia Barilla's many American students head first for books on American cooking, says Giancarlo Gonizzi, the librarian who classified its contents along the lines of the Dewey decimal system to help users find their way around. "The White House Cookbook", published in 1964, is among the system's "sixes"—thematic cookery—and so is a book on eating in Alcatraz. The library's oldest volume, "De Partibus Aedium", from 1516, is catalogued in the "nines"—gastronomic history, culture and tradition—where an illustrated account of a magnificent feast offered by King James II to Pope Innocent XI, published in 1688, too can be found. Also in this section is "La Cucina Futurista: Un Pranzo che Evitò un Suicidio" ("Futuristic Cooking: A Lunch that Prevented a Suicide"), published in 1932, with illustrations of dishes that anticipate how today's chefs take account of shape and colour when positioning each piece of food on the plate.

The library's nucleus came from Barilla's own library and a collection put together over 30 years by Giorgio Orlandini, an expert on Italian cooking. As well as adding new books, the library buys from antiquarian booksellers and at auction, although Mr Gonizzi says the prices asked can sometimes be hard to digest.

The library has the largest collection of works on cookery open to the public in Italy; unsurprisingly, the sections dealing with food technology and Italian cooking are very well stocked. The library is popular and widely used. Under an agreement with Parma's city authorities it is open one day a week and students of food science at Parma's university are regular visitors. To make itself easier to use, the library has begun digitising its contents and plans to make them available online. Who knows how food will be prepared 50 or 100 years from now? Paolo Barilla, deputy chairman of the pasta-maker, insists that a library that tells us about what and how we cooked in the past will keep the present alive in the future.

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Correction: Georgian gold

Dec 18th 2008
From The Economist print edition

NYU's Institute for the Study of the Ancient World organised the travelling exhibition of Georgian gold now on show at the Fitzwilliam Museum in Cambridge ("Ancient bling", November 15th). Our apologies for not making that clear.

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Economist.com
PEOPLE
OBITUARY

H.M.

Dec 18th 2008
From The Economist print edition

Henry Molaison, a man without memories, died on December 2nd, aged 82

eyevine New York Times



EACH time Suzanne Corkin met H.M. during one of his visits to the Massachusetts Institute of Technology, she would ask him if they had met before. He would smile and say yes, and when she asked him where he would reply, “In high school.” They did not actually meet until he was in his late 30s, but they worked together for nearly five decades, and the last time they met he still failed to recognise her. The most she ever elicited in him was a sense of familiarity.

More extraordinary still, a sense of familiarity was all his own face elicited in him. People were fascinated by H.M., for whom life came to a standstill in 1953, and one of the questions they always asked about him was what happened when he looked in the mirror. Dr Corkin reports that there was no change in his facial expression, his conversation continued in a matter-of-fact tone and he did not seem upset—though this could have been because of the damage done to his amygdalas, brain structures that are important for processing emotion. Once, in the later years, when she asked him what he was thinking as he gazed at his reflection, he replied, “I’m not a boy.”

H.M., or Henry M.—his family name was kept secret until he died—grew up in the countryside outside Hartford, Connecticut. He was 16 when he suffered his first *grand mal* epileptic seizure. The fits became more frequent, delaying his graduation from high school and, later, preventing him from holding down a job, though he tried to work on an assembly line.

By the time he was 27 he was having as many as 11 seizures a week and was on near-toxic doses of anti-convulsants. His desperate parents were referred to William Beecher Scoville, a neurosurgeon at Hartford Hospital. It was 1953 and psychosurgery—which was later to be banned, or at least restricted, in many countries—was at the height of its popularity. Scoville himself had performed frontal lobotomies, though he was dissatisfied with the way they blunted his patients’ emotions.

In some ways H.M. was a product of that dissatisfaction, because Scoville had been working on a new, experimental operation, and he decided to try it on H.M. He would remove his medial temporal lobes (one on each side of the brain), the presumed origin of his seizures. Each lobe includes an amygdala and a seahorse-shaped structure called the hippocampus.

The operation was successful: H.M. experienced only two serious seizures during the subsequent year. But this happy outcome came at a terrible price. From the date of the operation he was unable to form new memories, and he also lost many of the memories he had laid down before it. Although he could recall the Wall Street crash and the second world war, he was left with no autobiographical memories at all. Having seen the effects of his handiwork, a shocked Scoville began to campaign against the operation. This meant that H.M. was the only person ever to undergo it.

Tracing a star

Two years later Scoville invited Brenda Milner, a neuropsychologist who had been studying post-operative amnesia, to come and study H.M. Her work had led her to suspect that the hippocampus was important for forming memories, and that it might be the place where they are stored. In the decades that followed, the experiments that first she and then her student Dr Corkin conducted with H.M. produced a more complex picture.

One of the most striking experiments had H.M. tracing a star between two parallel lines, when he could see his drawing hand only in a mirror. With practice his performance improved, though he always denied having attempted the task before. This led Dr Milner to propose a distinction between procedural memory (memory for a skill) and declarative memory (conscious recall of having used that skill), and to suggest that the two are stored in different places. Thanks to H.M., the scientists also learned that the hippocampus is crucial in forming some long-term memories, but not for maintaining or retrieving them.

It has often been said that a man with no memory can have no sense of self. Both Dr Milner and Dr Corkin disagree. H.M. had a sense of humour, even if he was capable of telling the same anecdote three times in 15 minutes. He was polite, and would cup Dr Corkin's elbow as they walked around MIT. Everybody liked him, though it was a temptation for those who knew him to patronise him, to treat him like a favourite child or pet, such was the inequality of his and their knowledge about his life. It was a temptation, Dr Milner says, that they struggled against daily.

H.M. held no grudge against Dr Scoville. In fact, he dreamed of becoming a neurosurgeon, though he always said that could never happen, because blood spurting from the incision would cloud his glasses, preventing him from doing his best for the patient. By the time this obituary appears he will have gone under the knife again, this time for an autopsy. Before long his brain will appear in three digitised dimensions on the internet, for researchers to pore over. He never knew how much he contributed to science, says Dr Corkin, but if someone had told him it would have given him a warm, fuzzy feeling—for a few seconds, at least.

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Overview

Dec 18th 2008
From The Economist print edition

The **Federal Reserve** lowered the target for its benchmark interest rate from 1% to between zero and 0.25% and said the rate was likely to remain "exceptionally low" for a while. The Fed said it would use "all available tools" to secure sustainable economic growth and stable prices. That may include purchases of longer-term government debt.

Consumer prices in **America** fell by 1.7% in November, the biggest one-month decrease on record. Prices were 1.1% higher than a year earlier; as recently as July, the annual inflation rate was 5.6%. The value of retail sales declined by 1.8% in November, dragged down by a big drop in car purchases and by lower petrol prices.

Business confidence in **Japan** has crashed, according to the Bank of Japan's quarterly Tankan survey. The percentage balance of large manufacturers reporting "favourable" over "unfavourable" conditions fell to -24 in December from -3 in September. The 21-point drop was the largest since 1975.

A composite measure of **euro area** activity, based on surveys of purchasing managers in manufacturing and services, fell from 38.9 to a new low of 38.3 in December. Industrial production in the euro zone slid by 1.2% in October, after a 1.8% drop in September.

Britain's unemployment rate jumped to 6% in the three months to October, from 5.5% in the previous three months. A timelier measure of unemployment, based on benefit claimants, rose by 75,700 in November, the biggest one-month increase since 1991.

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Output, prices and jobs

Dec 18th 2008
From The Economist print edition

Output, prices and jobs

% change on year ago

	Gross domestic product				Industrial production	Consumer prices			Unemployment
	latest	qtr*	2008†	2009†	latest	latest	year ago	2008†	rate‡, %
United States	+0.7 Q3	-0.5	+1.3	-1.0	-5.5 Nov	+1.1 Nov	+4.3	+4.1	6.7 Nov
Japan	-0.5 Q3	-1.8	+0.3	-0.9	-7.1 Oct	+1.7 Oct	+0.3	+1.6	3.7 Oct
China	+9.0 Q3	na	+9.6	+7.5	+5.4 Nov	+2.4 Nov	+6.9	+6.2	9.2 2007
Britain	+0.3 Q3	-2.0	+0.8	-1.4	-5.2 Oct	+4.1 Nov§	+2.1	+3.7	6.0 Oct††
Canada	+0.5 Q3	+1.3	+0.6	+0.1	-3.7 Sep	+2.6 Oct	+2.4	+2.7	6.3 Nov
Euro area	+0.7 Q3	-0.8	+0.9	-0.9	-5.3 Oct	+2.1 Nov	+3.1	+3.2	7.7 Oct
Austria	+1.5 Q3	+0.6	+1.6	-0.4	-0.5 Sep	+2.3 Nov	+3.1	+3.2	3.0 Oct
Belgium	+1.3 Q3	+0.4	+1.3	-0.4	+3.3 Sep	+3.1 Nov	+2.9	+4.5	10.5 Nov‡‡
France	+0.6 Q3	+0.6	+0.9	-0.7	-7.2 Oct	+1.6 Nov	+2.4	+3.0	8.2 Oct
Germany	+0.8 Q3	-2.1	+1.4	-1.0	-3.9 Oct	+1.4 Nov	+3.2	+2.6	7.5 Nov
Greece	+3.1 Q3	+2.0	+2.6	+1.4	-4.5 Oct	+2.9 Nov	+3.9	+4.4	7.4 Sep
Italy	-0.9 Q3	-2.1	-0.3	-1.1	-6.9 Oct	+2.7 Nov	+2.4	+3.4	6.7 Q3
Netherlands	+1.8 Q3	+0.1	+2.0	-0.4	-2.5 Oct	+2.3 Nov	+1.9	+2.5	3.8 Nov††
Spain	+0.9 Q3	-0.9	+1.3	-1.1	-11.2 Oct	+2.4 Nov	+4.1	+4.4	12.8 Oct
Czech Republic	+4.2 Q3	+3.8	+4.2	+3.0	-7.6 Oct	+4.4 Nov	+5.0	+6.6	5.3 Nov
Denmark	-1.2 Q3	-1.9	nil	-0.7	-5.1 Oct	+2.7 Nov	+2.5	+3.5	1.7 Oct
Hungary	+0.8 Q3	-0.3	+1.2	-1.5	-7.2 Oct	+4.2 Nov	+7.1	+6.3	7.7 Oct††
Norway	+0.6 Q3	-2.8	+1.8	-0.2	-0.9 Oct	+3.2 Nov	+1.5	+3.8	2.5 Sep***
Poland	+4.8 Q3	na	+5.1	+2.9	+0.2 Oct	+3.7 Nov	+3.6	+4.3	8.8 Oct‡‡
Russia	+6.2 Q3	na	+7.0	+3.7	-8.7 Nov	+13.8 Nov	+11.5	+14.1	6.1 Oct‡‡
Sweden	nil Q3	-0.4	+1.0	-0.1	-7.1 Oct	+2.5 Nov	+3.3	+3.7	6.2 Nov‡‡
Switzerland	+1.7 Q3	+0.1	+1.8	-0.2	+0.7 Q3	+1.5 Nov	+1.8	+2.5	2.7 Nov
Turkey	+0.5 Q3	na	+2.5	+1.5	-8.5 Oct	+10.8 Nov	+8.4	+10.6	9.0 Q3‡‡
Australia	+1.9 Q3	+0.3	+2.4	+1.1	+2.8 Q2	+5.0 Q3	+1.9	+4.4	4.4 Nov
Hong Kong	+1.7 Q3	-2.0	+3.1	-1.0	-6.7 Q3	+1.8 Oct	+3.2	+4.2	3.8 Nov††
India	+7.6 Q3	na	+6.2	+6.1	-0.4 Oct	+10.4 Oct	+5.5	+8.3	7.2 2007
Indonesia	+6.1 Q3	na	+6.1	+3.5	+7.0 Oct	+11.7 Nov	+5.6	+10.5	8.5 Feb
Malaysia	+4.7 Q3	na	+5.6	+3.2	-3.1 Oct	+7.6 Oct	+1.9	+5.8	3.5 Q2
Pakistan	+5.8 2008**	na	+6.0	+2.9	-6.8 Sep	+24.7 Nov	+8.7	+20.8	5.6 2007
Singapore	-0.6 Q3	-6.8	+2.2	-2.2	-12.6 Oct	+6.4 Oct	+3.6	+6.6	2.2 Q3
South Korea	+3.8 Q3	+2.1	+4.5	+1.6	-2.4 Oct	+4.5 Nov	+3.5	+5.0	3.3 Nov
Taiwan	-1.0 Q3	na	+4.0	+1.5	-12.5 Oct	+1.9 Nov	+4.8	+3.8	4.3 Oct
Thailand	+4.0 Q3	+2.3	+4.0	+1.9	+2.0 Oct	+2.2 Nov	+3.0	+5.8	1.2 Aug
Argentina	+7.8 Q2	+8.7	+6.2	+2.2	-1.5 Oct	+7.9 Nov	+8.5	+9.0	7.8 Q3‡‡
Brazil	+6.8 Q3	+7.4	+5.3	+2.4	+0.8 Oct	+6.4 Nov	+4.2	+5.8	7.5 Oct‡‡
Chile	+4.8 Q3	-0.2	+3.9	+1.0	-0.8 Oct	+8.9 Nov	+7.4	+8.9	7.5 Oct††‡‡
Colombia	+3.7 Q2	+2.8	+3.2	+2.0	-3.3 Sep	+7.7 Nov	+5.4	+7.1	10.1 Oct‡‡
Mexico	+1.6 Q3	+2.6	+1.8	-0.2	-2.7 Oct	+6.2 Nov	+3.9	+5.2	4.1 Oct‡‡
Venezuela	+4.6 Q3	na	+3.5	-3.0	-6.8 Aug	+32.7 Nov	+20.7	+31.2	7.2 Q3‡‡
Egypt	+6.8 Q2	na	+7.2	+4.9	+6.8 Q2	+20.3 Nov	+6.9	+18.2	8.6 Q3‡‡
Israel	+5.1 Q3	+2.3	+4.2	+1.8	+3.0 Sep	+4.5 Nov	+2.8	+4.7	5.9 Q3
Saudi Arabia	+3.5 2007	na	+6.1	+3.2	na	+10.4 Sep	+4.9	+8.5	na
South Africa	+2.9 Q3	+0.2	+3.5	+2.5	-1.6 Oct	+11.8 Nov	+8.4	+11.4	23.2 Sep‡‡
MORE COUNTRIES Data for the countries below are not provided in printed editions of *The Economist*									
Estonia	-3.5 Q3	na	-2.0	-2.5	-11.0 Oct	+8.0 Nov	+9.1	+10.5	7.5 Oct
Finland	+1.3 Q3	+0.4	+2.6	+1.1	+0.8 Oct	+3.6 Nov	+2.9	+4.2	6.0 Oct
Iceland	-0.8 Q3	-5.5	-0.5	-9.7	+0.4 2007	+17.1 Nov	+5.2	+13.8	3.3 Nov‡‡
Ireland	-0.8 Q2	-2.1	-2.5	-2.3	-9.8 Oct	+2.5 Nov	+5.0	+4.2	7.8 Nov
Latvia	-4.6 Q3	na	-1.5	-7.0	-9.0 Oct	+11.8 Nov	+13.7	+15.7	6.8 Sep
Lithuania	+3.1 Q3	+1.6	+4.4	+1.6	na	+9.1 Nov	+7.8	+11.0	5.0 Nov‡‡
Luxembourg	+2.8 Q2	+4.5	+2.5	+1.5	-0.7 Sep	+2.0 Nov	+3.2	+4.0	4.5 Oct‡‡
New Zealand	-0.3 Q2	-2.1	+0.3	+1.1	+2.4 Q2	+5.1 Q3	+1.8	+4.3	4.2 Q3
Peru	+8.7 Oct	na	+9.1	+5.5	+3.6 Oct	+6.7 Nov	+3.5	+5.7	7.3 Oct††
Philippines	+4.6 Q3	+3.4	+4.2	+1.8	+12.5 Sep	+9.9 Nov	+3.2	+9.6	7.4 Q3‡‡
Portugal	+0.6 Q3	-0.5	+0.4	-0.8	-3.0 Oct	+1.4 Nov	+2.8	+2.9	7.7 Q3‡‡
Slovakia	+7.0 Q3	na	+6.8	+3.3	nil Oct	+4.9 Nov	+3.1	+4.6	7.5 Oct‡‡
Slovenia	+3.8 Q3	na	+4.2	+2.0	-3.1 Oct	+3.1 Nov	+5.7	+5.9	6.6 Oct‡‡

*% change on previous quarter, annual rate. †*The Economist* poll or Economist Intelligence Unit estimate/forecast. ‡National definitions.- §RPI inflation rate 3.0% in Nov. **Year ending June. ††Latest three months. ‡‡Not seasonally adjusted. ***Centred 3-month average

Sources: National statistics offices and central banks; Thomson Datastream; Reuters; Centre for Monitoring Indian Economy; OECD; ECB

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The Economist commodity-price index

Dec 18th 2008
From The Economist print edition

The Economist commodity-price index

2000=100

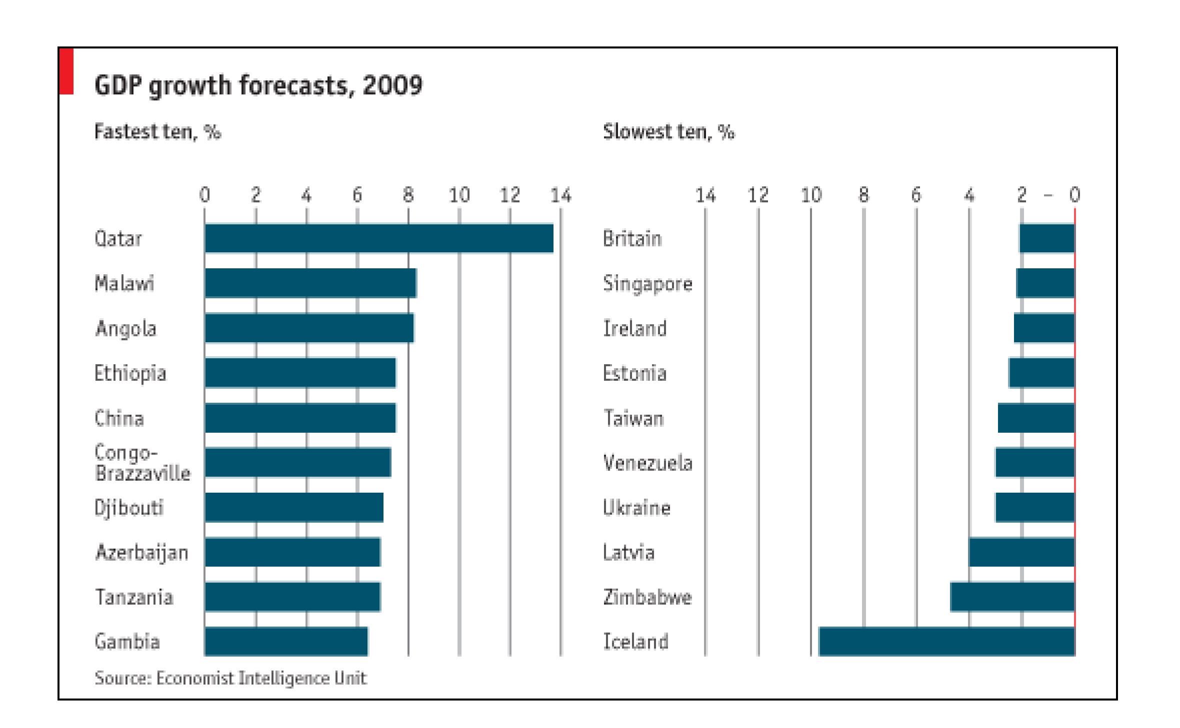
	Dec 9th	Dec 16th*	% change on one month	% change on one year
Dollar index				
All items	143.7	150.6	−6.1	−30.5
Food	164.9	178.1	+0.6	−17.9
Industrials				
All	116.3	115.0	−17.2	−46.8
Nfa†	103.0	104.2	−18.1	−41.3
Metals	123.6	120.9	−16.8	−49.0
Sterling index				
All items	147.3	149.3	−7.9	−8.2
Euro index				
All items	103.1	101.2	−13.8	−27.2
Gold				
$ per oz	768.80	836.65	+13.3	+4.4
West Texas Intermediate				
$ per barrel	42.15	44.10	−18.9	−51.1

*Provisional †Non-food agriculturals.

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GDP growth forecasts, 2009

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From The Economist print edition



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Trade, exchange rates, budget balances and interest rates

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From The Economist print edition

Trade, exchange rates, budget balances and interest rates

	Trade balance*	Current-account balance		Currency units, per $		Budget balance	Interest rates, %	
	latest 12 months, $bn	latest 12 months, $bn	% of GDP 2008†	Dec 17th	year ago	% of GDP 2008†	3-month latest	10-year gov't bonds, latest
United States	−853.1 Oct	−697.9 Q3	−4.5	-	-	−3.2	0.50	2.19
Japan	+64.8 Sep	+176.5 Oct	+3.8	87.9	113	−3.3	0.82	1.30
China	+278.8 Nov	+371.8 2007	+10.5	6.84	7.38	0.2	2.28	2.75
Britain	−182.6 Oct	−82.9 Q2	−3.0	0.65	0.50	−4.9	3.03	3.45
Canada	+52.2 Oct	+19.2 Q3	+1.0	1.20	1.00	0.2	0.83	3.13
Euro area	−40.4 Sep	−51.4 Sep	−0.4	0.70	0.70	−1.4	3.38	2.94
Austria	+0.1 Sep	+14.5 Q2	+3.0	0.70	0.70	−1.0	3.16	3.87
Belgium	+10.2 Aug	−9.8 Jun	+0.7	0.70	0.70	−0.8	3.20	3.79
France	−82.7 Oct	−57.1 Oct	−1.7	0.70	0.70	−3.0	3.16	3.43
Germany	+283.3 Oct	+265.5 Oct	+6.6	0.70	0.70	0.3	3.16	2.96
Greece	−68.9 Oct	−52.5 Sep	−10.3	0.70	0.70	−3.2	3.16	5.19
Italy	−17.8 Oct	−70.8 Sep	−3.0	0.70	0.70	−2.6	3.16	4.24
Netherlands	+60.0 Sep	+62.5 Q2	+6.3	0.70	0.70	1.1	3.16	3.61
Spain	−153.9 Sep	−165.8 Sep	−10.0	0.70	0.70	−2.5	3.16	3.80
Czech Republic	+5.6 Oct	−5.8 Oct	−2.9	18.3	18.2	−1.9	4.02	4.05
Denmark	+6.4 Oct	+5.8 Oct	+1.1	5.20	5.19	3.9	6.75	3.43
Hungary	nil Oct	−8.8 Q2	−5.0	186	176	−3.4	10.52	9.31
Norway	+82.5 Nov	+86.5 Q3	+18.4	6.61	5.59	19.7	4.54	3.76
Poland	−22.8 Oct	−28.1 Oct	−5.6	2.87	2.51	−1.8	6.48	5.57
Russia	+194.6 Oct	+116.5 Q3	+6.0	27.5	24.7	5.8	13.00	9.74
Sweden	+18.6 Oct	+40.5 Q3	+7.6	7.66	6.58	2.4	1.46	2.51
Switzerland	+18.2 Nov	+60.2 Q2	+9.8	1.09	1.15	1.1	0.77	2.06
Turkey	−75.2 Oct	−47.1 Sep	−6.4	1.54	1.19	−1.6	19.44	9.24‡
Australia	−9.0 Oct	−56.7 Q3	−5.5	1.44	1.16	0.3	4.38	4.14
Hong Kong	−27.2 Oct	+27.5 Q2	+9.4	7.75	7.80	−3.9	1.19	1.31
India	−109.6 Oct	−21.9 Q2	−3.6	47.7	39.6	−4.3	5.64	6.61
Indonesia	+13.5 Oct	+3.9 Q3	+0.4	10,988	9,430	−1.4	12.10	10.56‡
Malaysia	+42.0 Oct	+35.3 Q2	+12.8	3.53	3.35	−5.0	3.40	4.75‡
Pakistan	−22.0 Nov	−14.0 Q2	−6.2	79.5	60.9	−6.7	15.45	24.54‡
Singapore	+20.6 Oct	+29.2 Q3	+16.6	1.45	1.46	0.8	0.77	1.86
South Korea	−14.2 Nov	−8.3 Oct	−2.3	1,325	940	1.0	4.49	4.77
Taiwan	+3.9 Nov	+28.8 Q3	+5.8	32.7	32.5	−1.7	1.95	1.42
Thailand	+1.3 Oct	+2.6 Oct	−1.0	34.6	33.7	−1.4	3.85	2.35
Argentina	+14.2 Oct	+6.0 Q2	+2.7	3.40	3.14	0.7	18.88	na
Brazil	+26.1 Nov	−26.6 Oct	−1.8	2.35	1.80	−1.5	13.66	6.16‡
Chile	+11.2 Nov	−1.6 Q3	−2.6	633	498	5.9	8.40	3.09‡
Colombia	+2.7 Oct	−4.9 Q2	−2.4	2,167	2,005	−1.0	10.19	7.19‡
Mexico	−12.5 Oct	−11.8 Q3	−1.7	13.2	10.8	nil	8.03	8.08
Venezuela	+50.2 Q3	+49.4 Q3	+14.7	4.83	5.50§	−1.1	18.03	6.55‡
Egypt	−23.4 Q2	+0.9 Q2	+3.0	5.52	5.54	−6.5	11.70	6.39‡
Israel	−14.4 Nov	+2.6 Q3	+1.3	3.72	3.94	−0.7	2.23	3.84
Saudi Arabia	+150.8 2007	+95.0 2007	+29.1	3.75	3.75	11.6	2.98	na
South Africa	−9.5 Oct	−23.2 Q3	−7.8	9.85	6.91	0.2	11.30	7.25
MORE COUNTRIES Data for the countries below are not provided in printed editions of *The Economist*								
Estonia	−4.2 Sep	−2.7 Oct	−11.9	10.9	10.9	−1.0	7.85	na
Finland	+11.4 Oct	+8.1 Oct	+3.8	0.70	0.70	4.5	3.18	3.68
Iceland	−0.7 Nov	−5.4 Q3	−17.3	114	63.4	0.3	18.44	na
Ireland	+39.9 Sep	−15.8 Q2	−2.6	0.70	0.70	−6.5	3.16	4.24
Latvia	−6.4 Sep	−5.1 Oct	−14.2	0.49	0.48	−2.0	12.46	na
Lithuania	−7.7 Oct	−6.5 Oct	−13.9	2.41	2.40	−0.9	9.09	na
Luxembourg	−7.5 Sep	+5.1 Q2	na	0.70	0.70	0.3	3.16	na
New Zealand	−3.7 Oct	−11.4 Q2	−7.1	1.70	1.32	0.3	5.00	4.98
Peru	+5.5 Sep	−3.0 Q3	−2.8	3.07	2.97	2.7	6.53	na
Philippines	−8.6 Sep	+4.3 Jun	+1.8	46.9	41.8	−0.9	5.00	na
Portugal	−34.1 Sep	−28.7 Sep	−9.7	0.70	0.70	−2.4	3.16	3.87
Slovakia	−0.8 Sep	−5.9 Aug	−6.0	21.1	23.4	−2.3	1.56	4.13
Slovenia	−4.6 Sep	−3.4 Sep	−6.6	0.70	0.70	0.4	3.16	na

*Merchandise trade only. †*The Economist* poll or Economist Intelligence Unit forecast. ‡Dollar-denominated bonds. §Unofficial exchange rate.
Sources: National statistics offices and central banks; Thomson Datastream; Reuters; JPMorgan; Bank Leumi le-Israel; Centre for Monitoring Indian Economy; Danske Bank; Hong Kong Monetary Authority; Standard Bank Group; UBS; Westpac.

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Markets

Dec 18th 2008
From The Economist print edition

Markets

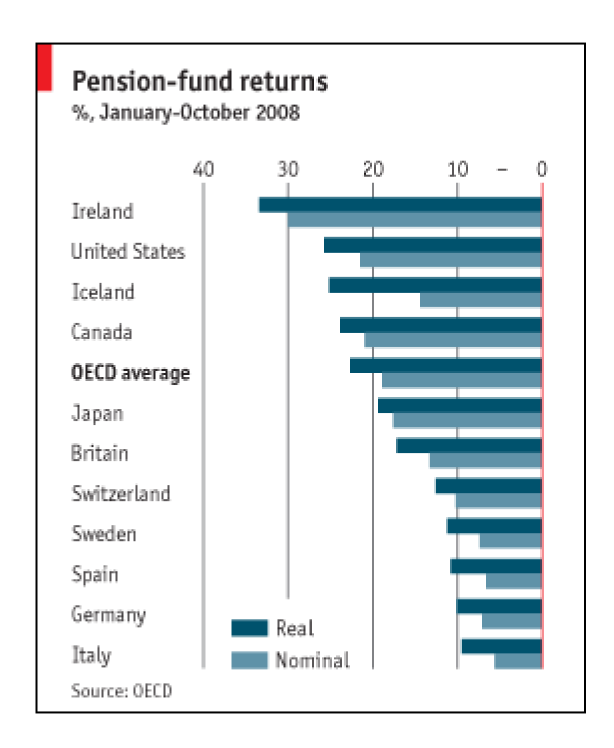
		% change on		
			Dec 31st 2007	
	Index Dec 17th	one week	in local currency	in $ terms
United States (DJIA)	8,824.3	+0.7	−33.5	−33.5
United States (S&P 500)	904.4	+0.6	−38.4	−38.4
United States (NAScomp)	1,579.3	+0.9	−40.5	−40.5
Japan (Nikkei 225)	8,612.5	−0.6	−43.7	−28.5
Japan (Topix)	838.5	+0.5	−43.2	−27.8
China (SSEA)	2,075.9	−4.9	−62.4	−59.8
China (SSEB, $ terms)	115.6	−5.0	−70.4	−68.4
Britain (FTSE 100)	4,324.2	−1.0	−33.0	−48.1
Canada (S&P TSX)	8,724.1	+1.0	−36.9	−48.3
Euro area (FTSE Euro 100)	744.5	−1.7	−45.9	−47.0
Euro area (DJ STOXX 50)	2,444.5	−2.0	−44.4	−45.6
Austria (ATX)	1,732.6	−3.5	−61.6	−62.4
Belgium (Bel 20)	1,859.6	−2.4	−54.9	−55.9
France (CAC 40)	3,241.9	−2.4	−42.3	−43.4
Germany (DAX)*	4,708.4	−2.0	−41.6	−42.8
Greece (Athex Comp)	1,746.6	−4.7	−66.3	−67.0
Italy (S&P/MIB)	19,352.0	−2.4	−49.8	−50.8
Netherlands (AEX)	247.8	−3.3	−52.0	−52.9
Spain (Madrid SE)	979.2	+0.3	−40.4	−41.6
Czech Republic (PX)	833.2	−4.1	−54.1	−54.5
Denmark (OMXCB)	231.1	−3.8	−48.5	−49.5
Hungary (BUX)	12,615.6	−1.7	−51.9	−55.2
Norway (OSEAX)	266.4	+2.5	−53.3	−61.6
Poland (WIG)	27,394.2	−3.2	−50.8	−57.8
Russia (RTS, $ terms)	699.9	+6.7	−65.8	−69.4
Sweden (Aff.Gen)	196.9	−3.4	−42.2	−51.2
Switzerland (SMI)	5,548.2	−3.5	−34.6	−31.8
Turkey (ISE)	26,765.1	+11.4	−51.8	−63.2
Australia (All Ord.)	3,515.0	−1.6	−45.3	−55.9
Hong Kong (Hang Seng)	15,460.5	−0.8	−44.4	−44.1
India (BSE)	9,715.3	+0.6	−52.1	−60.4
Indonesia (JSX)	1,364.0	+3.7	−50.3	−57.5
Malaysia (KLSE)	862.5	+0.9	−40.3	−44.1
Pakistan (KSE)	8,105.6	−11.8	−42.4	−55.4
Singapore (STI)	1,779.3	−2.3	−48.7	−48.9
South Korea (KOSPI)	1,169.8	+2.1	−38.3	−56.4
Taiwan (TWI)	4,648.0	−0.2	−45.4	−45.8
Thailand (SET)	445.9	+5.2	−48.0	−49.3
Argentina (MERV)	1,148.0	+8.2	−46.6	−50.6
Brazil (BVSP)	39,947.0	+2.4	−37.5	−52.7
Chile (IGPA)	11,238.9	+0.9	−20.2	−37.2
Colombia (IGBC)	7,738.9	+0.8	−27.6	−32.6
Mexico (IPC)	22,572.5	+4.1	−23.6	−36.6
Venezuela (IBC)	34,461.5	+1.5	−9.1	−59.6
Egypt (Case 30)	4,484.0	+6.7	−57.2	−57.2
Israel (TA-100)	597.5	−4.7	−48.3	−46.5
Saudi Arabia (Tadawul)‡	4,903.8	+5.3	−55.6	−55.6
South Africa (JSE AS)	22,409.3	+2.2	−22.6	−46.3
Europe (FTSEurofirst 300)	828.5	−3.7	−45.0	−46.1
World, dev'd (MSCI)	928.1	+3.2	−41.6	−41.6
Emerging markets (MSCI)	586.1	+4.2	−52.9	−52.9
World, all (MSCI)	230.2	+3.3	−42.9	−42.9
World bonds (Citigroup)	825.9	+7.3	+13.1	+13.1
EMBI+ (JPMorgan)	381.5	+3.5	−12.0	−12.0
Hedge funds (HFRX)§	1,023.6	−0.6	−23.0	−23.0
Volatility, US (VIX)	49.8	55.7	22.5	(levels)
CDSs, Eur (iTRAXX)†	186.3	−4.0	+268.2	+260.8
CDSs, N Am (CDX)†	237.8	−15.7	+205.2	+205.2
Carbon trading (EU ETS) €	16.0	+5.1	−29.8	−31.2

*Total return index. †Credit-default swap spreads, basis points.
Sources: National statistics offices, central banks and stock exchanges; Thomson Datastream; Reuters; WM/Reuters; JPMorgan Chase; Bank Leumi le-Israel; CBOE; CMIE; Danske Bank; EEX; HKMA; Markit; Standard Bank Group; UBS; Westpac. ‡Dec 3rd. §Dec 16th.

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Pension-fund returns

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The financial crisis has taken its toll on pension funds. By October, the total assets of those in OECD countries had fallen by nearly 20% (22% in real terms) since the start of the year. Pension funds in the United States accounted for two-thirds of the $3.3 trillion losses. Irish funds, which did the worst, were the most exposed to equities. More diversified funds in other countries, which held more bonds in their portfolios, were partially shielded from stockmarket declines. Despite this year's setback, returns over longer periods remain respectable. For example, the annual real rate of return of pension funds in the past 15 years (including the bear market of 2000-02) was 8.5% in Sweden and 6.1% in America and Britain.

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